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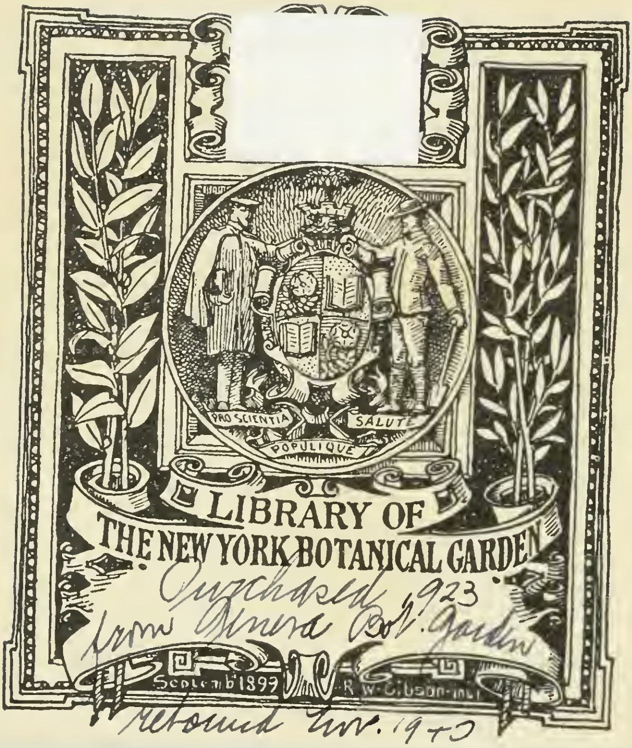
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OR,

ORNAMENTAL FLOWER-GARDEN AND SHRUBBERY:

CONSISTING OF

COLOURED FIGURES OF PLANTS AND SHRUBS,

CULTIVATED IN BRITISH GARDENS;

ACCOMPANIED BY THEIR

History, Best Method of Treatment in Cultivation, Propagation, &c.

AND

MONTHLY CHRONICLE

OF

BOTANICAL AND HORTICULTURAL NEWS.

CONTINUED

By JOHN LINDLEY, Ph. D. F.R.S. AND L.S.

PROFESSOR OF BOTANY IN UNIVERSITY COLLEGE, LONDON,
AND THE ROYAL INSTITUTION OF GREAT BRITAIN,
VICE-SECRETARY OF THE HORTICULTURAL SOCIETY,
&c. &c. &c.

Vol. 26

No, 1

1841.

OR VOL. XXVII. OF THE ENTIRE WORK.
OR VOL. XIV. OF THE NEW SERIES.

No!

yes!

——viret semper——nec fronde caducâ
Carpitur.

LONDON:
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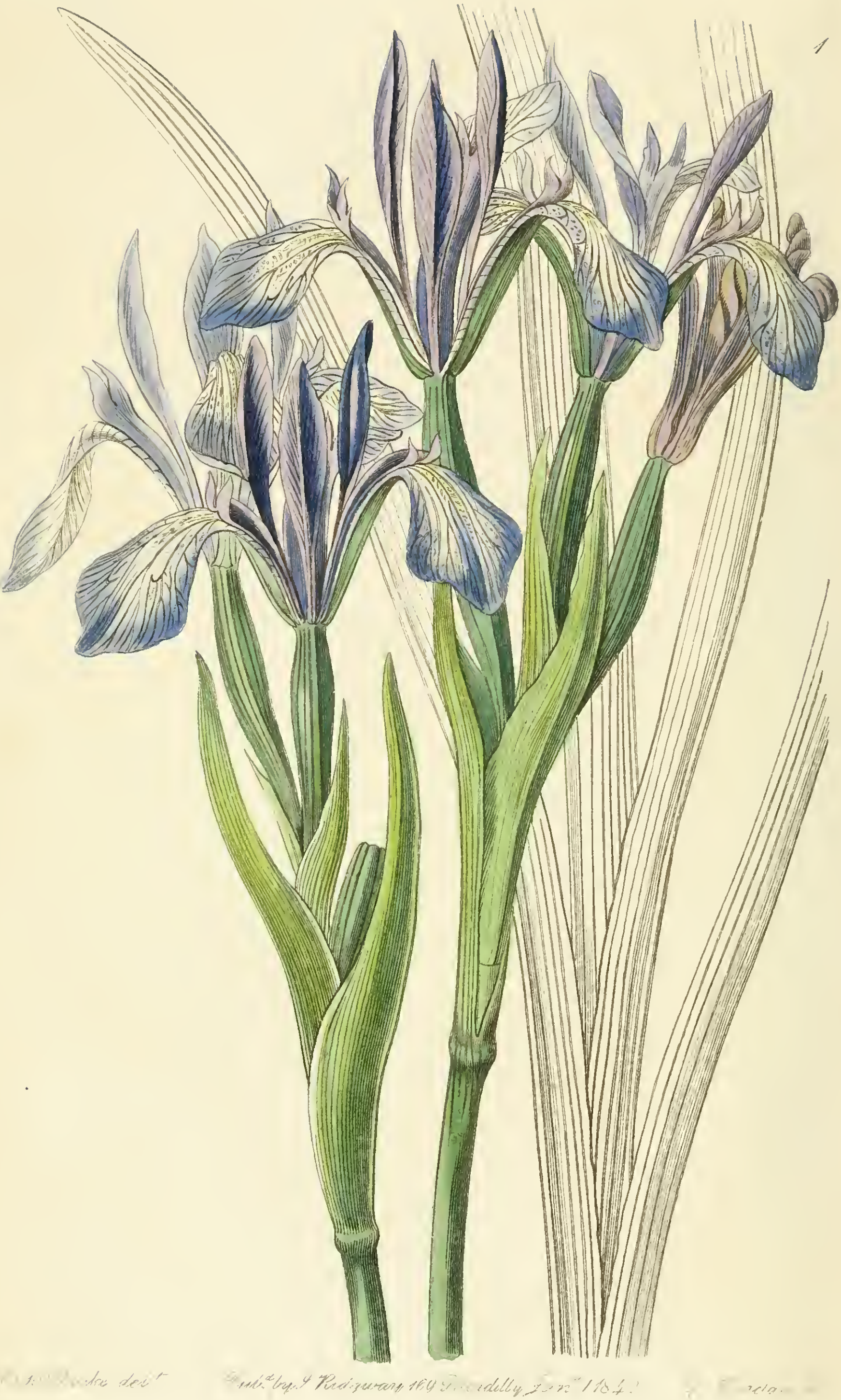

Miss Drake del^t Pub^d by J. Ridgway 169 Piccadilly Jan^y 1842 G. Barclay sc

IRIS fragrans.

Sweet-scented Iris.

TRIANDRIA *MONOGYNIA*.

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Nat. ord. IRIDACEÆ.

IRIS. *Botanical Register, vol.* 3. *fol.* 246.

I. *fragrans;* imberbis, foliis ensiformibus angustis glaucescentibus caulis multiflori longitudine, ovariis fusiformibus bracteis herbaceis longioribus, perianthii tubo nullo, sepalorum limbo rhomboideo integro, petalis spathulato-lanceolatis integerrimis basi angustatis sepalorum longitudine, stylis fissis.

This very distinct species of Iris is a native of the North of India, where it was found by Professor Royle. In habit it resembles the *I. decora* of Wallich, which is the *I. nepalensis* of Don, but its flowers are altogether different; it is also extremely like the *I. sulcata* of Wallich's Indian herbarium, no. 5049, referred to *I. decora* by Professor Royle, but from which it appears to be distinguished by the form of the fruit, which, in *I. fragrans*, when young, is fusiform and longer than the bracts, while in *I. sulcata* it is oblong, and shorter than the bracts. *I. longifolia*, a Cashmere species, figured in the *Illustrations of the Botany of the Himalayan Mountains*, resembles this in the form of the leaves, but they are described as being scabrous at the margin; moreover the scape is very short and one-flowered in that plant, and the lobes of the style are said to be entire; in the absence of a tube to the flower the two correspond.

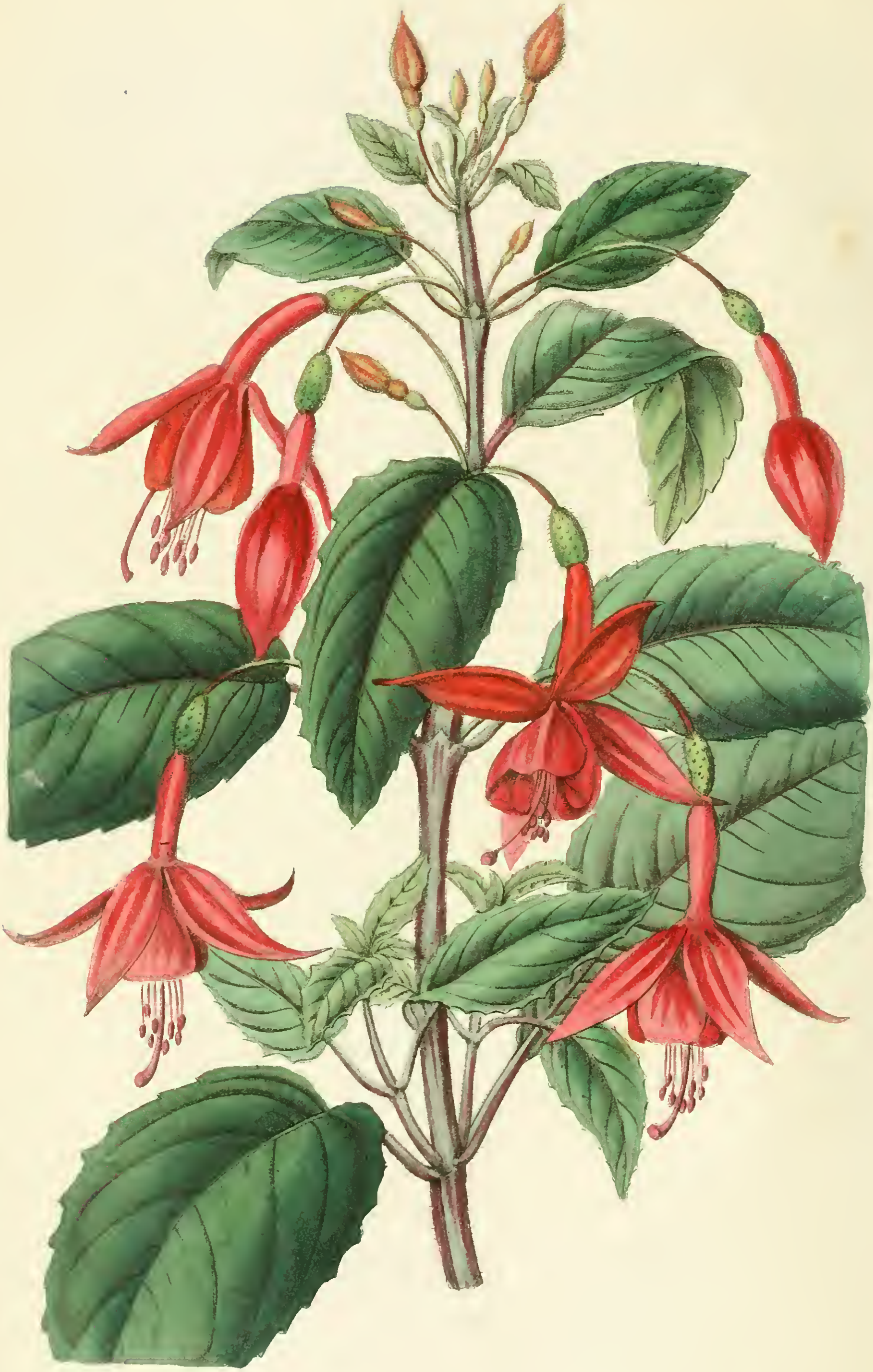
AUG 7 - 1923

The fragrance of the flowers of this species makes it a desirable border plant, in addition to its pretty appearance. It is found to be a very hardy perennial, requiring about the same treatment as the common Iris sibirica, growing freely in any rich soil, and blossoming about the end of June. It may be easily increased by dividing the old stock.

January, 1840.

The accompanying figure was taken in the Garden of the Horticultural Society, from plants raised in 1835 from seeds presented by Dr. Royle. They sustained without injury the rigour of the winter of 1837-8.

As it has not yet fruited I am unable to state whether the skin of its seed is membranous or succulent, or whether the seed itself is flat or round.



[illegible] delt Pubd by J. Ridgway 169 Piccadilly Jany 1844

STANDISH'S Fuchsia.

Garden Variety.

My principal reason for publishing a figure of this very remarkable plant is because it is a mule between *Fuchsia fulgens* and *F. globosa*, two plants as dissimilar as possible in the same genus. The former indeed, figured in this work for the year 1838, tab. 1, differs in so many respects from the common species of the genus, especially in having an herbaceous stem and tuberous roots, that it has been supposed impossible that it should be a Fuchsia at all. It now however appears, from the fact of its crossing freely with the common Fuchsias, that it really does belong to the genus.

The first plants thus obtained, were, I believe, exhibited by Mrs. Lawrence at one of the great Garden Meetings of the Horticultural Society in the summer of 1839; but I had then no leisure to do more than admire them. Subsequently they have been procured by other persons, and appear to be produced without any difficulty. They are completely intermediate between the two parents; in this case having the leaves, flowers, and habit of their mother *F. globosa*, with the hairiness and tenderness of foliage of their father, some of his colouring and much of his herbaceous character. It is however by no means necessary to take *F. globosa* for the female parent, as *F. fulgens* is found to intermix readily with many other species.

That which is now figured is the handsomest I have seen. It was raised by Mr. John Standish, Nurseryman, Bagshot, who sent me specimens last July, together with flowers of several others of inferior appearance. He tells me that it is an exceedingly free bloomer, with a stiff erect habit; and I can state, from my personal knowledge, that the plant is *very handsome*.

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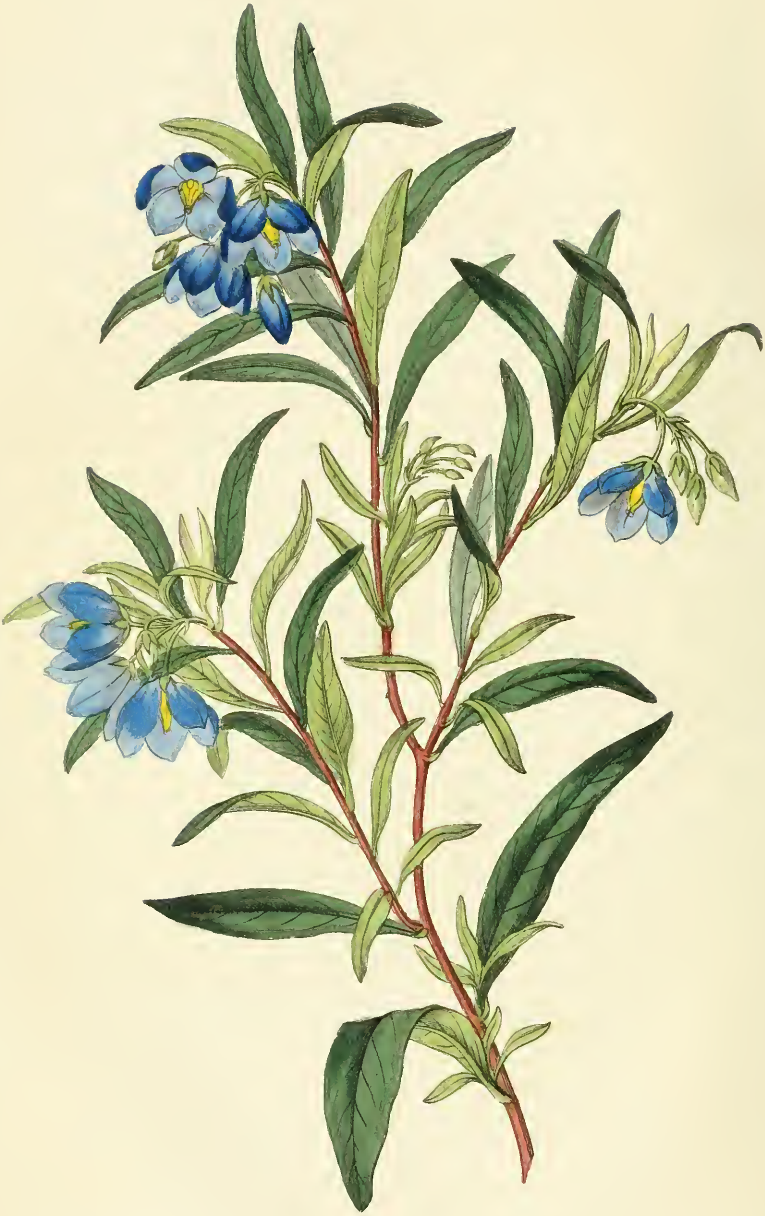

Miss Drake delt   Pub by J. Ridgway 169 Piccadilly Jany 1840   G. Barclay sc

SŌLLY̆Ă linēăris.

Narrow-leaved Sollya.

PENTANDRIA *MONOGYNIA.*

Nat. ord. PITTOSPORACEÆ.

SOLLYA. Botanical Register, vol. 17. *fol.* 1466.

S. *linearis;* foliis glaberrimis linearibus et lineari-lanceolatis obtusiusculis, cymis multifloris nutantibus glabris, stigmate subsimplici, fructibus oblongis. *Bot. Reg.* 1839. *miscell. no.* 132.

The beauty of the graceful *Sollya heterophylla*, now so common, and so general a favourite, makes a new species of the genus a most welcome addition to our gardens, and I had therefore much gratification in announcing sometime since that the plant now figured had been procured from Swan River by Mr. Mangles.

It resembles the other species in general appearance, and altogether in the colour and size of its flowers, but it has exceedingly narrow leaves, which have no appearance of ever being serrated, and it is altogether a more slender-looking plant; nevertheless, as was before stated, it appears to be a more profuse flowerer, some of my wild specimens having as many as eleven flowers in a cluster, and a single branch five such clusters. In more minute circumstances other differences are perceptible; in *S. linearis* the stigma is less distinctly two-lobed than in *S. heterophylla;* and the fruit of the former is oblong, as broad at one end as the other, 7½ lines long, from the point of the stigma, and 2½ broad, while in the latter it is much narrower and more attenuated to each end, 8½ lines long by 1½ broad, so that the proportional length of the two diameters are about as 9 to 3 in *S. linearis*, and 10 to 1¾ in *S. heterophylla.*

The species inhabits the Swan River Colony, where it was found by Mr. Drummond and others. It may be multiplied either by cuttings or from seeds. Cuttings root rather slowly, and when seed can be procured it is much easier to get a stock of plants from it. The species is of the easiest culture, growing freely in a mixture of loam and peat. Properly speaking it is a greenhouse plant, and will form a handsome bush if planted out in a conservatory ; but like *S. heterophylla* it will live out of doors in mild winters, in the warmer parts of the country.

With regard to *S. angustifolia*, a third supposed species of the genus, it is reported by Labillardiére, its sole discoverer, who called it Billardiera fusiformis, to be a native of Van Diemen's Island ; it has not however been met with, as far as I know, by any botanist since his time ; no trace of it occurs among Mr. Gunn's extensive collections. I have, however, lately received from Mr. Webb an authentic specimen of the plant, out of Labillardiére's herbarium, and I find it so very like *S. heterophylla* that there seems nothing to distinguish it from that plant, except the presence of a few long hairs on the young twigs, and on the back of some of the leaves, of which there is a trace on the younger leaves of *S. heterophylla* itself. I therefore fear it is nothing more than a slight variety of that species.

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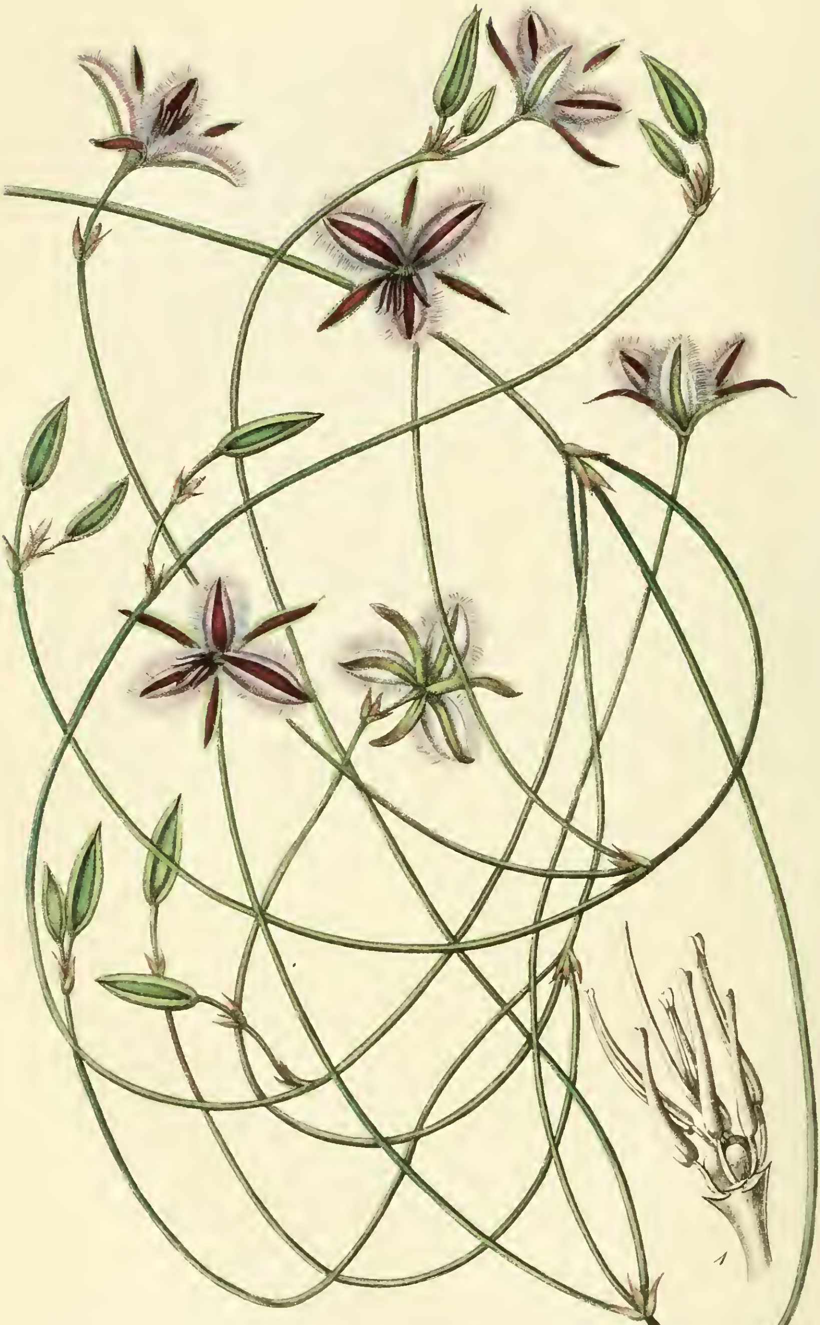

Miss Drake delt. Pubd. by J. Ridgway 169 Piccadilly Jany. 1. 1840. G. Barclay sc.

THYSANŌTŬS intricātŭs.

Entangled Thysanotus.

TRIANDRIA *MONOGYNIA* & HEXANDRIA *MONOGYNIA.*

Nat. Ord. LILIACEÆ.
THYSANOTUS. Botanical Register, vol. 8. *fol.* 655.

T. *intricatus;* caulibus teretibus glabris sulcatis, ramis divaricatis ultimis furcatis, foliis squamæformibus, pedunculis rigidis ancipitibus subbifloris, staminibus 6 styloque decurvis.
T. intricatus. *Bot. Register,* 1838. *miscell.* 111.

Caulis *diffusus, angulatus, glaber,* 2-3 *pedes longus, altè sulcatus, basi teres;* ramis *rigidis, intricatis, divaricatis, denique furcatis, sensim tetragonis, ultimis pedunculos efficientibus elongatis ancipitibus apice* 1-3-*floris.* Folia *minima, rigida, ovata, carinata, utrinque uninervia, sæpiùs viridia, nunc sphacelata.* Pedicelli *basi foliis duobus pluribusve oppositis, sphacelatis v. scariosis, aliquandò in unifloris deficientibus, bracteati, medio articulati.* Flores *violacei, pollicem lati.* Sepala *pedicellis duplò longiora, lineari-lanceolata, acuminata, quinquecostata, herbacea, margine petaloidea.* Petala *fimbriata, in medio herbacea, tricostata.* Stamina 6, *violacea, declinata;* antheris *apice emarginatis, basi cordatis, alternis brevioribus.* Ovarium *triloculare, trigonum; ovulis in medio loculorum geminis, collateralibus, pendulis;* stylus *subulatus, violaceus, antheris longior.* Descriptio ad spontaneam.

A pretty Swan River plant, introduced by Robert Mangles, Esq. of Sunning Hill. When it was drawn for this work I only knew it from its Garden state, in which it formed a mass of weak trailing branches, with numerous flowers at the extremity, and its specific character was so framed as to express that circumstance. I now however find, from wild specimens in my possession, that its branches are naturally rigid, and short jointed, and that the supposed debility of the plant arose from its being drawn up in cultivation. Its flowers, which when expanded are beautiful, are produced either singly, or in twos and even threes, at the end of one of the forks into which the branches ultimately divide, and it always happens, in the wild state, that of such forks the arm which bears the flowers is very much longer than the other.

The plant, like all the species of the genus, requires protection in winter: but during summer it will succeed in the open air. Under such circumstances, however, the flowers seldom open in their native brilliancy. The best way of cultivating them is in a frame, made upon the principle of Mr. Ward's cases, described by Mr. Ellis in the Gardener's Magazine for September 1839, and only ventilated occasionally. In such a frame I saw them in wonderful beauty in the Kew Garden in the autumn of 1838.

The seed may be sown in any season, except late in autumn or in winter; for when the plants are weak at that time they are almost sure to perish from the want of light. The soil used in potting should be loam and peat mixed with a little sand. The plants should be placed near the glass, and after they are strong enough be fully exposed to light and air.

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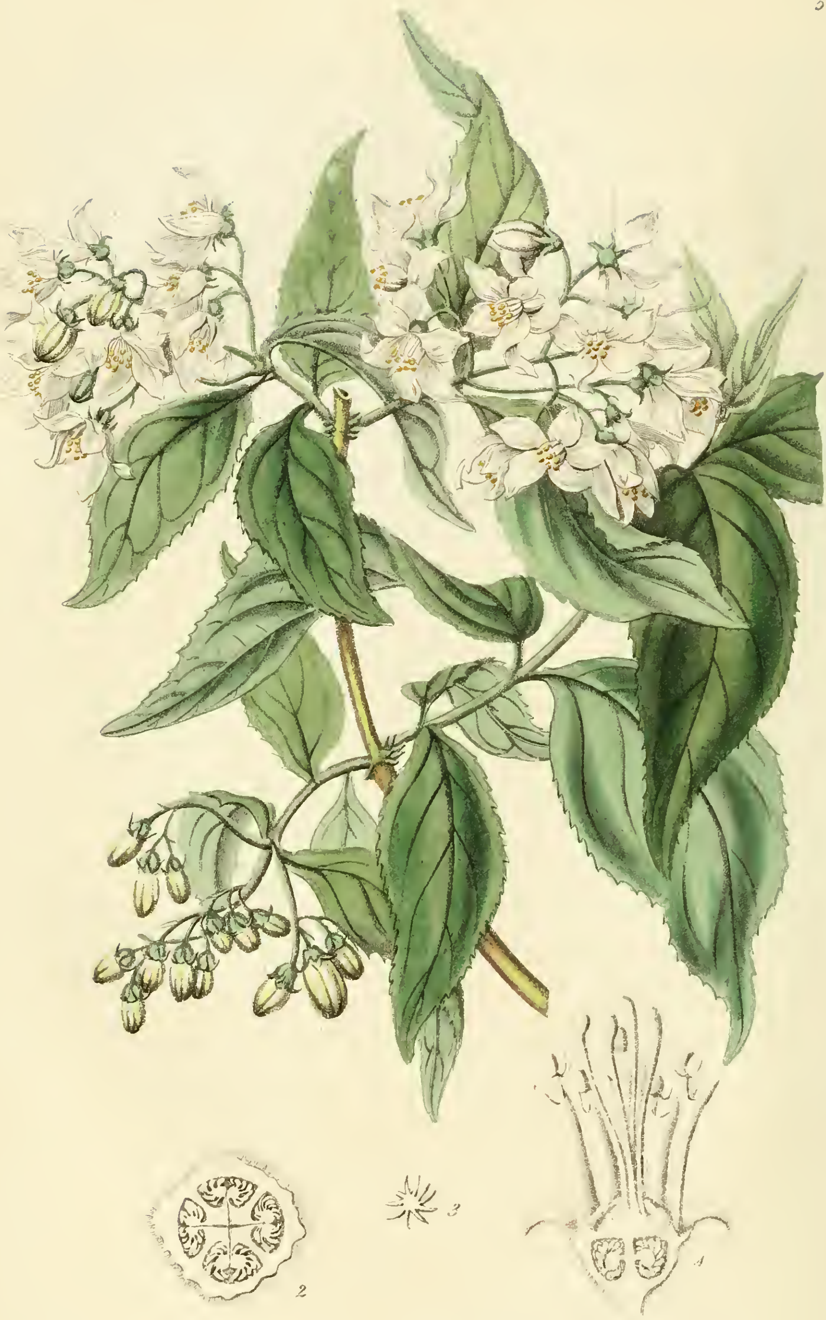

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DEŪTZĬĂ corymbōsă.

Corymb-flowering Deutzia.

DECANDRIA *DI-TETRAGYNIA.*

Nat. ord. PHILADELPHACEÆ.

DEUTZIA. *Botanical Register, vol.* 20. *fol.* 1718.

D. *corymbosa;* foliis petiolatis ovatis acuminatis serrulatis ramulisque pubescentibus, paniculis corymbosis, calycis laciniis triangularibus acuminatis, filamentis tridentatis, antheris glabris, stylis 4-5.

D. corymbosa. *R. Brown in Wall. cat. no.* 3652. *Royle's Illustr. p.* 216. *t.* 46. *f.* 2.

The genus Deutzia, from the beauty and hardiness of the species, has become an object of great interest, and every addition to it is important in a Horticultural point of view. By the discoveries of Dr. Wallich and others in the North of India, of Professor Bunge in the North of China, and of Dr. v. Siebold in Japan, many new ones have been added to the original *D. scabra* of Thunberg; of these the following account has been given by Siebold.

" All the species are shrubs, of which some (*D. scabra, crenata*) succeed only on plains but little elevated above the level of the sea, while others (*D. gracilis, Brunoniana, corymbosa, staminea*) prefer the deep and humid valleys of lofty mountains. The most common species in Japan is *D. scabra*, which grows along hedges, on gentle slopes, and on rocks, seldom at a greater height above the sea than 1200 feet, where it is associated with *Euonymus, Viburnum, Eurya, Ligustrum, Lonicera, Vitis, Cissus,* &c. It is much like our Syringa, except that the flowers are much smaller, and the branches curve upwards, &c. Towards the end of the year the leaves of this species are collected for the use of the cabinet-makers, who employ it as a polishing material in place of the Dutch Rushes (Equisetum) of Europe. Hedges are also formed of the shrub, and it is cultivated in gardens, especially a variety with double flowers, which is agreeably intermingled with the different species of Hydrangea, Aralia pentaphylla, &c. *D. crenata* is more rare, and succeeds best in the vallies of little elevation, and damp; it is also found in hedges intermixed with D. scabra. D. *gracilis* occurs only on the high mountains of the South of Japan, whence I received it alive. It succeeded very well in the Botanical Garden of Dezima, and would be a beautiful ornament of our gardens." (*Flora Japonica*, p. 23.)

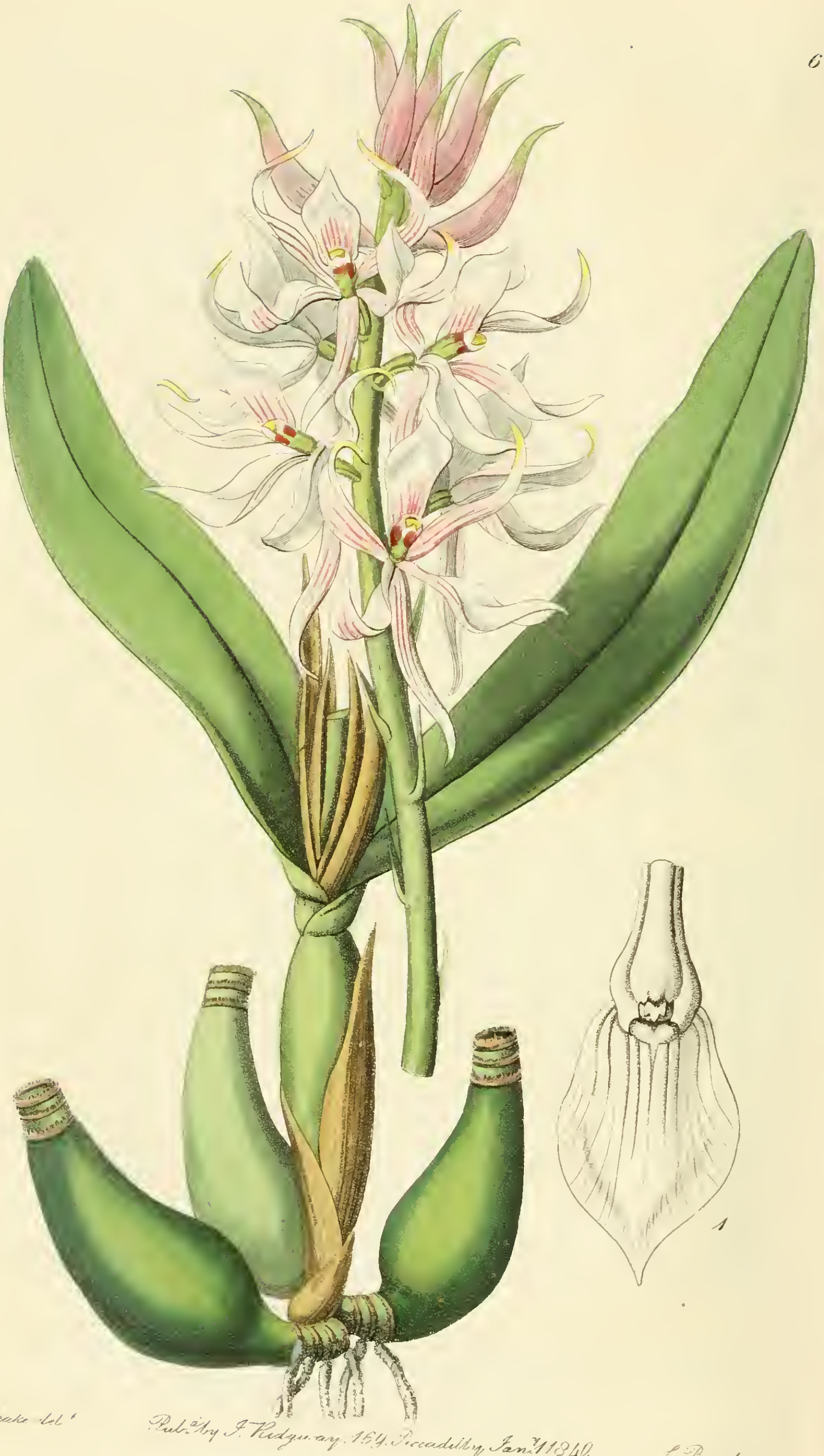
The species now figured was found by Dr. Wallich's people in Kamaon, and by Professor Royle on the highest mountains of the Himalayas, such as Acharanda and Urrukta. *D. staminea* and *Brunoniana* are, we are informed by the same authority, common about Mussooree, and every where in the mountains at similar elevations. (*Illustrations*, p. 216.)

In the Gardens this forms a very pretty and hardy shrub, growing four or five feet high in any good garden soil, and requiring about the same treatment as the species of Philadelphus. It yields an agreeable lemon-scent, and flowers, if planted in the open border, about June; but it will force very well, if subjected to the same treatment as Persian Lilacs, and such plants. It strikes readily from cuttings of the half-ripe wood, and the young plants flower freely when so multiplied.

The plant, in the Garden of the Horticultural Society, from which this figure was taken, was first presented to the Society by Mr. H. Low of Clapton, who received it from Dr. v. Siebold. It was subsequently raised in the garden from seeds received from the Honourable Court of Directors of the East India Company.

Fig. 1. represents a section of a flower, deprived of its petals, and shewing the manner in which the placentæ are constructed. Fig. 2. is a transverse section of the ovary. Fig. 3. is one of the star-like hairs with which the branches, leaves, fruit, and back of the petals are, more or less, closely covered; it is not however magnified enough to shew the real nature of these most curious parts. If highly magnified the stellate hairs of this plant are among the most beautiful of all microscopical objects, and I can compare them to nothing so well as to stars formed of icicles covered with little glittering points. There is this remarkable in their structure, that each star has a convex centre, whence the rays diverge, appearing to be the apex of a primitive hair, of which the rays are the second joints planted perpendicularly upon it. This is very imperfectly shewn in the highly magnified figures given in Dr. v. Siebold's beautiful plates.

D. *parviflora* of Bunge is hardly distinct from this species.



Drake del^{t} Pub^{d} by J. Ridgway, 169. Piccadilly Jan^{y} 1 1840. G. Barclay sc.

EPIDĒNDRŪM glumăcĕūm.

Glumaceous Epidendrum.

Nat. ord. Orchidaceæ, § Epidendreæ.
EPIDENDRUM. Botanical Register, vol. 1. *fol.* 17.

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§ Osmophytum, *Bot. Reg.* 1839. *misc. no.* 135.

E. *glumaceum;* pseudobulbis ovatis apice angustatis diphyllis, foliis angustè oblongis patentibus, racemo terminali cylindraceo e squamis glumaceis acuminatissimis pedunculo longioribus erumpente, sepalis linearibus petalisque lineari-lanceolatis acuminatissimis, labello obovato acuminato convexo integerrimo basi unicalloso. *Bot. Reg. misc. no.* 50.

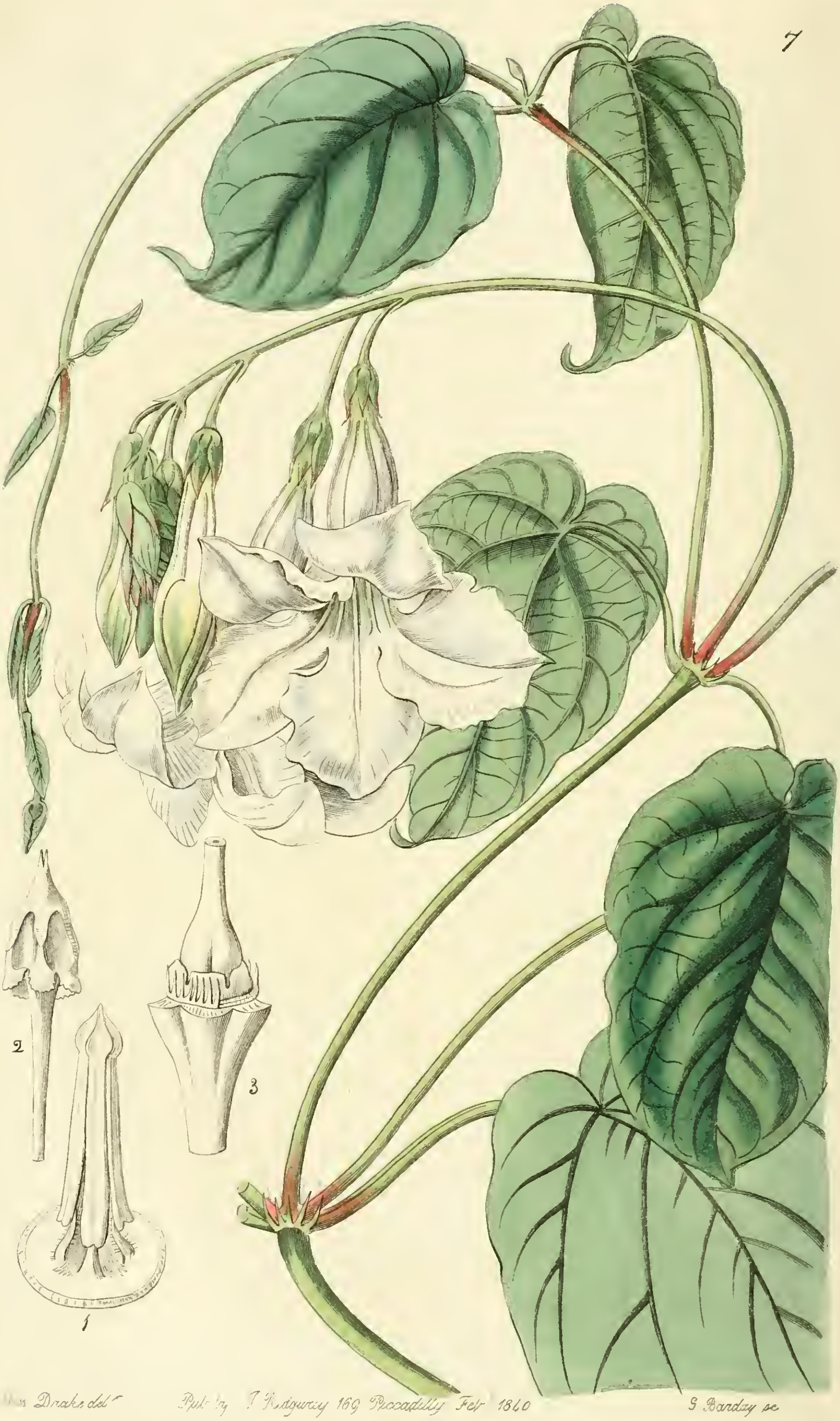
This very pretty plant was imported from Brazil by Messrs. Rollissons. It has the habit and sweet odour of E. *fragrans,* from which it differs in the colour of its flowers, in the long tapering figure of the flower-buds, which is caused by the peculiar form of the sepals and petals, and in the shape of the labellum, which is convex not concave, obovate, and delicately striped with pink at its base.

It derives its specific name from the long, withered, sharp-pointed, ribbed scales, resembling the *glumes* of grasses, out of which the raceme of flowers grows.

It submits readily to cultivation in the moist stove. The soil in which it grows best is rich brown turfy peat, well mixed with the materials of drainage. It requires a good supply of water, both at its roots and also over its leaves, and is not so easily injured from this element as many other plants belonging to the order. This treatment however is of course only applicable during its growing season, for, like other plants of the kind, it should be kept nearly dry at certain periods.

It is propagated by division of the rhizoma or prostrate ringed stem, out of which the pseudo-bulbs grow. Every ring is produced by the fall of a scale, or rudimentary leaf;

in the axil of every one of those scales there is a bud, capable of becoming a young plant; under ordinary circumstances however, a few only of such buds develope and become pseudobulbs, the rest remaining dormant. But although dormant they are not dead; and if the rhizoma is cut to pieces, and thus the power of lengthening at the end arrested, the plant will seek to repair its losses by the developement of the dormant buds.



Miss Drake del.   Pub. by J. Ridgway 169 Piccadilly Feb 1840   G Barclay sc

7

* MANDĒVILLĂ suavĕŏlēns.

Sweet-scented Mandevilla.

PENTANDRIA *MONOGYNIA.*

Nat. ord. APOCYNACEÆ, § ECHITEÆ.

MANDEVILLA. *Calyx* pentaphyllus, imbricatus, erectus, intùs annulo pectinato auctus. *Corolla* hypogyna, campanulato-infundibularis, fauce tuboque esquamatis, limbi 5-fidi laciniis subæquilateris. *Stamina* 5, basi corollæ tubi inserta: *antheræ* in conum circa stigma conniventes, apice membranaceæ. *Ovarium* biloculare, polyspermum. *Stylus* unus; *stigma* conicum, a latere 5-foveatum, basi campanulatum 5-lobum, apice bicuspidatum. Annulus hypogynus 5-lobus, carnosus; lobis truncatis. *Fructus* . . . . —— *Frutex* Bonariensis, *volubilis, foliis petiolatis membranaceis, stipulis pectinatis, racemis secundis axillaribus multifloris.*

MANDEVILLA suaveolens.

Caulis *volubilis;* ramis *pennæ corvinæ crassitie, glabris, supra nodos pilosis.* Folia *opposita, petiolata, cordato-oblonga, membranacea, subtùs glauca, suprà glabra, venarum paginæ inferioris axillis villosis;* stipulæ *pectinatæ.* Racemi *axillares, longipedunculati, nutantes, multiflori;* floribus *magnis, candidis, odoratissimis, secundis.* Corollæ *laciniæ oblongæ, undulatæ, apiculatæ; tubus intùs* 10-*plicatus.* Filamenta *pubescentia.* Stigmatis *lobi in margine inferiore crenati.* Annulus *pectinatus inter corollæ et calycis basis pallidus, carnosus, annuli hypogyni longitudine.*

This new climber was sent from Buenos Ayres, by H. J. Mandeville, Esq., H. M. Minister at that place, to the Hon. W. F. Strangways, by whom seeds were presented to the Horticultural Society. It had been collected by Mr. Tweedy, and sent home under the name of the Chile Jasmine.

It has, however, no other relation to the Jasmine than that it is a twiner, with white fragrant flowers. The latter are most deliciously sweet; and, from their large size and snowy whiteness, very beautiful to look upon. It will probably form an abundant flowerer; but, like all seedling shrubs, its first stage of growth is more productive of foliage than blossoms.

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* I have much pleasure in naming this beautiful twiner after Henry John Mandeville, Esq. H.B.M. Minister at Buenos Ayres, to whom we are indebted for the introduction of this and many other interesting plants.

February, 1840.

I find no genus of the order with which it can be identified, unless it is thrown into Echites; from which it is clearly distinguished, 1. by the form of its corolla, which is more like that of Beaumontia than of Echites; and 2. by the presence of a pectinated ring between the bases of the calyx and corolla. This unwonted appendage occurs also in some Acanthaceæ, and in a few other cases; but its real nature has never, that I am aware of, been suspected. It would appear, however, that in this case it represents the stipules of the calycine leaves!

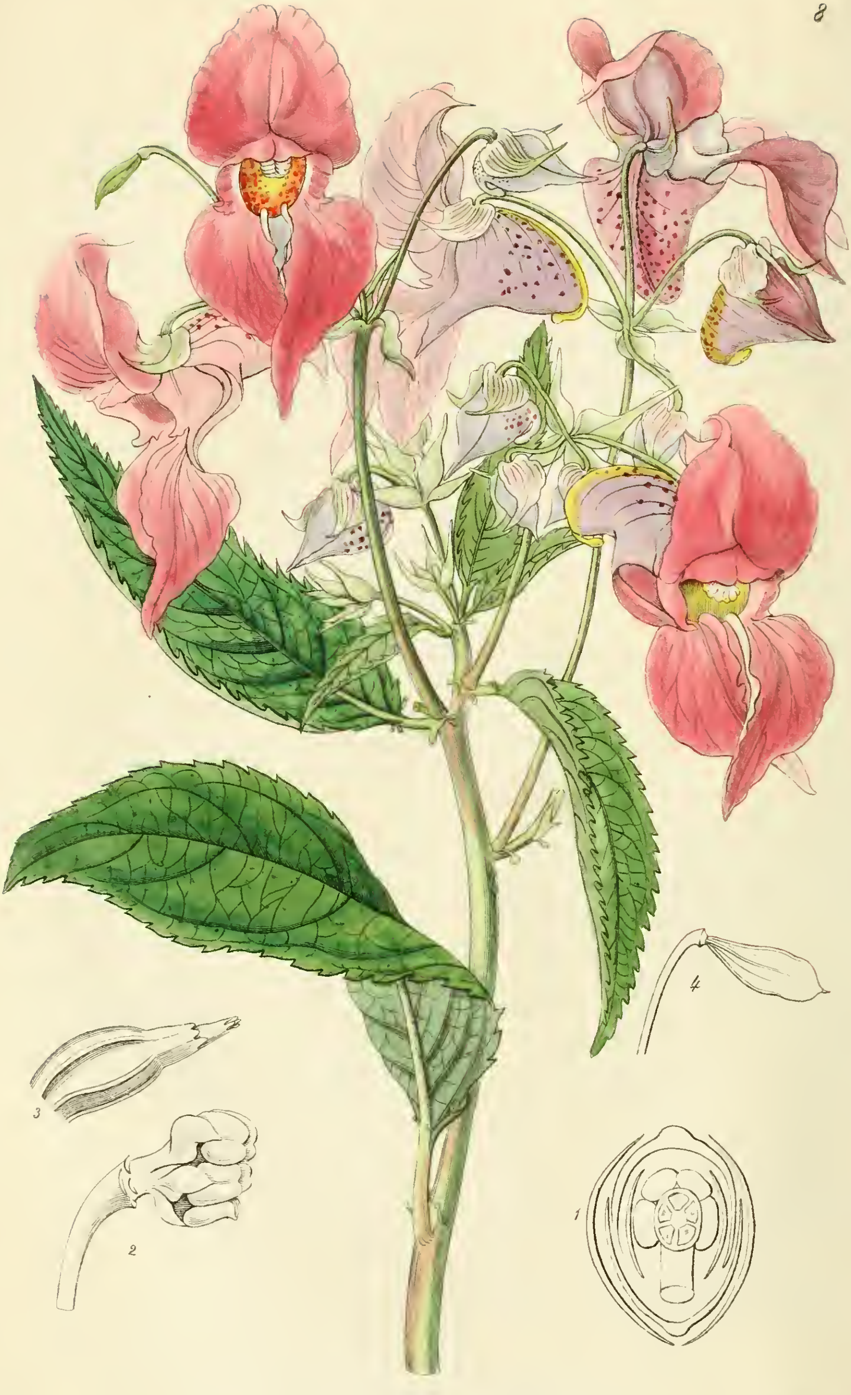
Although its fruit is unknown, there can be little doubt that it is a genus to be added to the tribe *Echiteæ* in Endlicher's *genera plantarum;* to which also I may take this opportunity of observing must be united the genus *Hæmadictyon*, published in the year 1824, in the 6th volume of the *Horticultural Transactions*, p. 70.

Fig. 1. represents the anthers, adhering in a cone, and that portion of the corolla from which they spring; 2. shews the very curious stigma; 3. is a view of the accessory pectinated ring, and the hypogynous scales already mentioned, together with the ovary and the base of the style.

The seeds of this beautiful plant were sown in a pit, with very little heat, where they soon germinated. Some of the plants raised in this manner were planted out of doors early in spring; others were grown in pots, and trained round trellis work; and a third set were planted out in a conservatory, which was kept rather above the usual temperature. Those planted out in the open air grew freely, but did not shew any signs of flower, and were destroyed by the frost in winter: those cultivated in pots grew rapidly, but would not flower: while those which were planted out in the conservatory covered a great space of wall, and flowered freely. Therefore those who wish to see this plant in perfection should plant it out in the conservatory, and train the young shoots to their utmost length, as it is always near the ends of the shoots where it blooms. After the flowering season is over the plants should be pruned back, in the same manner as vines, or other plants which bear their flowers and fruit upon the wood of the same year.

It is easily propagated from cuttings.

8



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* IMPĂTĬĒNS macrochīlă.

Large-lipped Balsam.

PENTANDRIA *MONOGYNIA.*

Nat ord. Balsamineæ (Geraniacearum mera §).
IMPATIENS. *Linn.*

I. *macrochila;* annua, erecta, succulenta, foliis glabris alternis ovato-lanceolatis serratis, petiolo brevi glanduloso, floribus terminalibus umbellatis, sepalo dorsali ovato acuminato apice recurvo, calcare brevi clavato inflexo, petalorum laminæ lobo altero maximo ovato-lanceolato deflexo, fructu brevi obovato apiculato.

This fine species of Balsam was, last year, introduced by the Hon. Court of Directors of the East India Company, and flowered abundantly in the garden of the Horticultural Society during the whole of the autumn. It is a native of the North of India, grows eight or ten feet high, and appears to be quite as hardy as any of our annuals, provided it is not exposed to frost.

Much discussion has taken place within a few years among Botanists as to the real nature of the parts which constitute the very irregular flower of a Balsam. According to Röper and others the two membranous external scales, and the spur, alone belong to the calyx, of which the two other sepals are usually deficient on that side of the flower which is opposite the spur; on the other hand the corolla consists of the large upper or back-piece, and of the two lateral inner wings, each of which last consists of two petals; and this view has been adopted by me in the *Natural System of Botany*, p. 138.

On the other hand, Achille Richard considers the two smaller exterior scales, together with the spurred and the back interior pieces, as forming a four-leaved calyx, while he regards the two innermost lobed pieces as two pairs of petals of a four-leaved corolla.

A third view is that of Bernhardi, who regards the exterior scales as bracts, the calyx as consisting of five parts, of which three only, namely, the spur and the back piece which is double, are present, and the others rudimentary or missing; while the corolla also consists of five parts, of which the four lower are united in pairs into the two innermost lobed pieces, and the fifth is either separate, as in Hydrocera, or consolidated with the two back united sepals into what he calls a petal-sepal.

A fourth view is that of Kunth, who considers the large back piece of the flower to be composed of two sepals, and together with the spur and exterior scales to form a five-leaved calyx; while he finds in the two innermost parts a corolla of four petals united in pairs, and he assumes the fifth petal to be abortive. This opinion has been adopted by Arnott in 1833, and by Presl in 1836, the latter having discovered the fifth or missing petal to be present occasionally in the garden Balsam, and always in Hydrocera triflora; both these Botanists finding in the genus Hydrocera the back piece, which is simple in Impatiens, composed of two parts, and therefore confirming the accuracy of the theory of Kunth.

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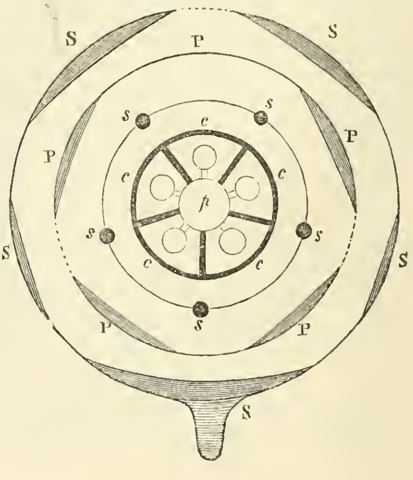
* So called from the impatience of the irritable fruit, which when ripe bursts with elasticity upon the slightest touch, whence the name of Noli tangere, or Touch me not.

Other opinions, more or less resembling these, have been formed by other persons, for which I have no room in this place; and they are the less important because I think the plant now before us shows that Kunth's theory is the only one that is correct.

If we make a section horizontally through a young flower-bud of this plant, we find the appearances represented at fig. 1. in the accompanying plate. There is in the centre an *ovary* of five cells; with these alternate the five *stamens*, of which the fifth or anterior has a longer filament than the others; so far the structure is regular, and we have all the necessary evidence of the flower, however irregular, being formed upon a quinary type. Right and left of the stamens stand the *two innermost pieces;* these cannot be simple, because they are opposite the intermediate stamens; but their two-lobed figure, when full grown, shews that each is double, and then, their apparent centre being in fact their united margins, they alternate with the anterior stamens, and so fall into the place usually destined for petals. The last mentioned parts are half enveloped by the *back piece*, which might, from its position, be the fifth petal; but the case of Hydrocera shewing it really to consist of two united parts, they must be opposite the stamens, and consequently are sepals. Next comes the *spur*, which overlaps the back piece, and stands opposite the anterior stamen; as no tendency to divide on the part of this piece is ever found it must be a sepal. Finally, the *external scales*, placed right and left of the whole flower, alternate with those parts already shewn to be sepals, and consequently are recognized as the two parts of the calyx required to complete the quinary place of the whole flower. It will be remarked, that a *fifth petal* has not been found; if the eye is turned upon the back piece, already found to be composed of two sepals, it will be seen that a part is missing between those two and the two corresponding stamens; and this is the place where the abortion of a fifth of the corolla may, upon the evidence of this flower, be assumed to occur, and where it is proved to take place by the evidence of Hydrocera, in which the part missing in the Balsam makes its appearance.

The annexed diagram will serve to illustrate the preceding observations, the parts of the flower, as they really exist in Impatiens being projected upon a plane consisting of five circles, of which the exterior (S) represents the sepals or calyx, the next (P) the petals or corolla, the third (*s*) the stamens, the fourth (*c*) the carpels, and the central (*p*) the placenta, or axis.

With regard to the remainder of the analyses, Fig. 2. represents the stamens; 3. the ovary, style, and stigma; 4. the ripe fruit.



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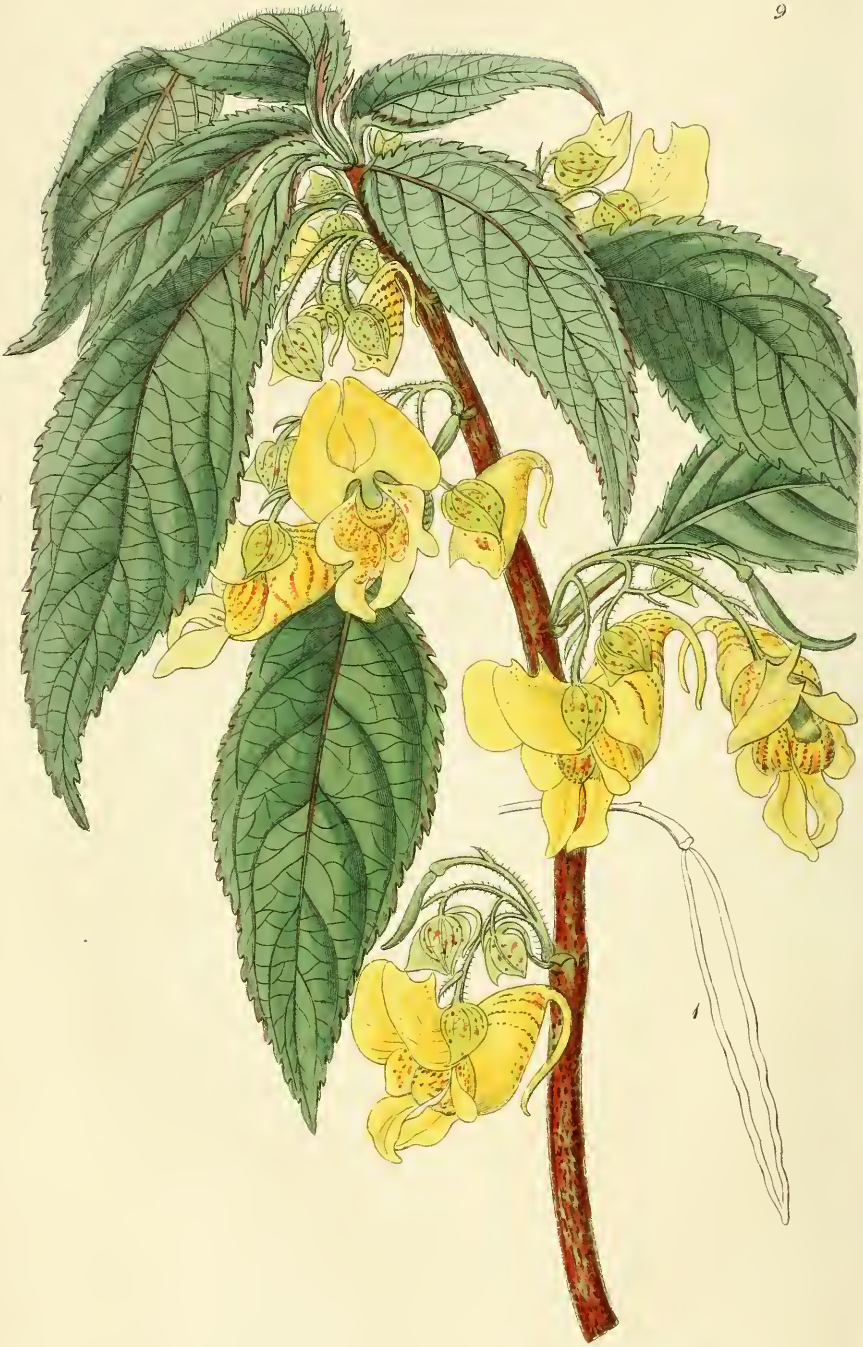

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IMPĂTĬĒNS tricōrnĭs.

Three-horned Balsam.

PENTANDRIA *MONOGYNIA.*

Nat. ord. BALSAMINEÆ (Geraniacearum mera §).

IMPATIENS. *Linnæus.*

I. *tricornis;* annua erecta, foliis alternis lanceolatis serratis pilosis in petiolum eglandulosum longè angustatis, racemis axillaribus pilosis foliis multò brevioribus, sepalo dorsali oblongo subbilobo sinu cuspidato dorso in cornu producto, calcare acuminato incurvo, petalorum lobo altero rotundato altero elongato acutiusculo, fructu longo lineari.

India swarms with species of this beautiful genus, all of which deserve the care of the cultivator. According to Dr. Wight, (*Madras Journal*, January, 1837,) at least a hundred species occur in those districts from which Roxburgh described only three. Forty-seven species are named by Wallich from Silhet, Pundooa, Nipal, and the Peninsula, multitudes occur in Ceylon, and the islands of the Indian Archipelago, and among the four raised last year from the collections distributed by the East India Company, the two now figured are new; the others are *I. glandulifera* of Royle and *I. longicornu* of Wallich, which last has been well figured lately in the Floral Cabinet under the name of *I. picta*.

Dr. Wight, in his valuable paper above quoted, states that a moist climate and moderate temperature are the circumstances most favourable, if not indispensable, to their production.

"At Courtallum, for example, whence I have eleven or twelve species, they most abound in shady places on the tops of the hills, with a mean temperature during the season of their greatest perfection not exceeding 70°, if so much. At Shevaggery, about fifty miles north of Courtallum, I found five, out of seven, species on the highest tops of the mountains; none of the five under 4,000 feet, and three of them above 4,500 feet of elevation; the mean temperature, as deduced from twenty observations, continued through four days, at an elevation of 4,100 feet, being 65° of Fahrenheit's scale. The two found at a lower elevation, were both either growing in the gravelly beds of streams, or immediately on their banks; the temperature of which was ascertained to be 65°, while that of the air at noon was only about 75°, a temperature, I presume, but little above that in which they delight on the Bengal frontiers. There is one other point, respecting the effect of climate on plants of this genus, to which I wish to call attention, as it may ultimately prove useful to any one who may again attempt to subdivide it, and is, in the meantime, in a physiological point of view, exceedingly curious. It is, that most of the species from the colder regions of the Himalaya mountains correspond with the European I. noli tangere, in the form and dehiscence of their capsule, that is, they split from the base, rolling the segments towards the apex, while those of the warmer regions split from the apex and roll their segments towards the base. This difference of habit between those of India Proper and the Himalayan forms is well worthy of notice, as it shows, that the affinity which exists between the flora of the latter and that of Europe, is stronger than between it and the Indian, and extends to even this most purely tropical genus.

" The innate power which plants enjoy of selecting the soil and climate in different countries, however remote, most suitable to their perfect development, and which the preceding remarks have shown to be so eminently possessed by those of this order, may, when the subject has been more studied and is better understood, prove of immense benefit to the scientific cultivator."

The plant now represented appears to be nearest to *I. campanulata*, from which it differs in inflorescence, in its flowers being yellow not cream-coloured, and in the dorsal sepal having a spur in the middle of its back. It derives its name of "three-horned" from the spur, the horn just mentioned and the apex of the back sepal together forming three conical processes.

Connected with these plants is a point of structure deserving of attention. In *I. macrochila* it will be found that the style is surrounded below its apex by five points,* which are evidently continuations of the backs of the carpels, (see fig. 3, t. 8.) What are these points? It appears to me that they are only the points of the carpellary leaves, which certainly in these plants are separate from the placenta, and are merely pressed down upon it so as to cover the ovules, thus confirming the accuracy of the views concerning placentation held by Schykofsky and Schleiden. If so, what else can the upper part of the style and the stigmas be, except the naked apex of the placenta, prolonged beyond the carpellary leaves? And then is not the conducting tissue of a style in most cases an extension of the placenta? and may we not consider the indusium of Goodeniaceæ, and, a *fortiori*, the well known rim found upon the stigma in Ericaceæ, as the expanded end of the carpellary leaves, while the stigma of those plants is the upper end of the placenta? These are points well worthy of investigation.

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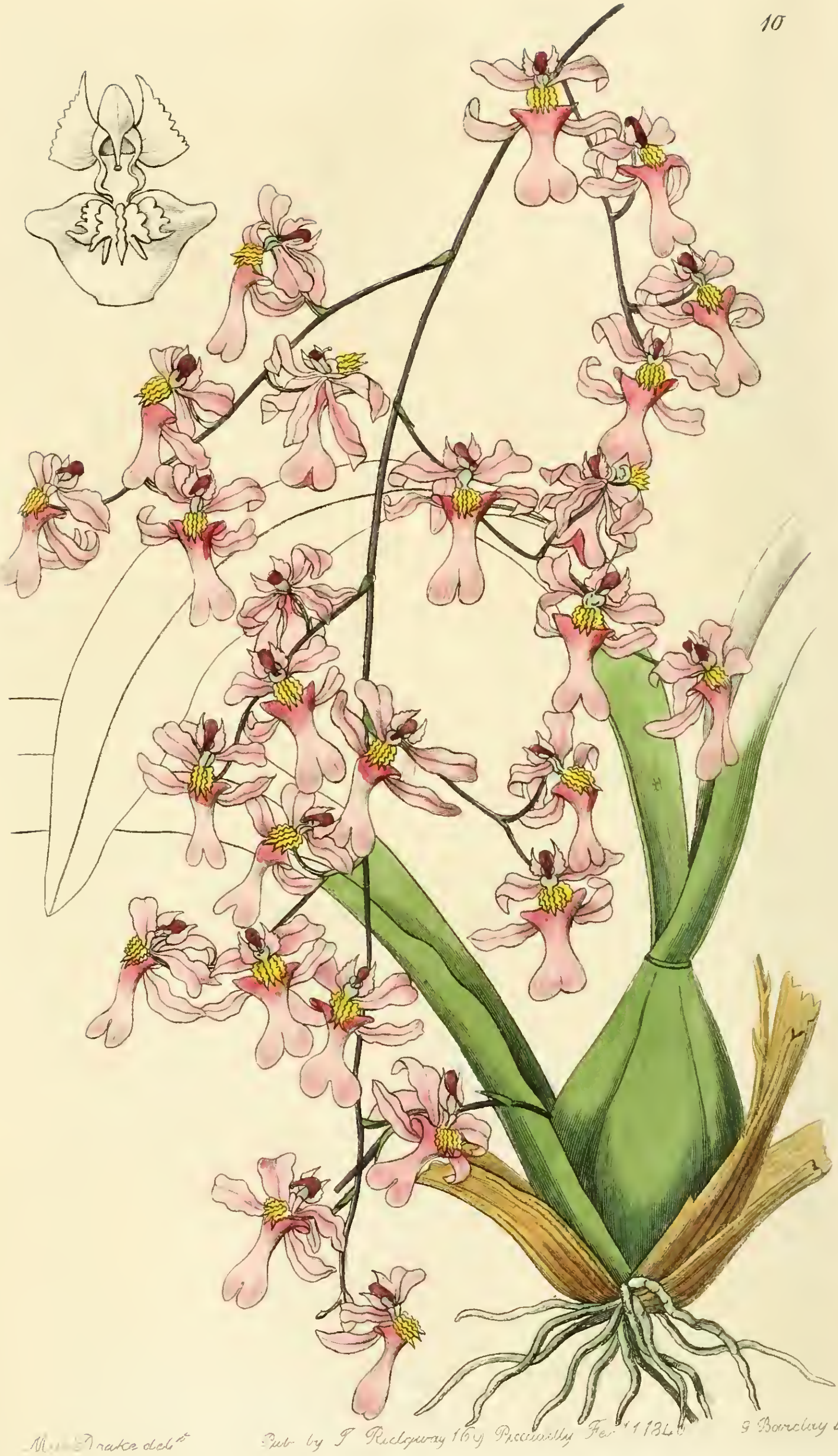
* These are also shown by Dr. Wight in his figures of *Impatiens grandis* and *umbellata*.

10



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10

ONCĪDĬŪM ornithorhȳnchūm.

Bird-billed Oncidium.

GYNANDRIA *MONANDRIA.*

Nat. ord. Orchidaceæ, § Vandeæ.

ONCIDIUM. *Botanical Register, vol.* 13. *fol.* 1050.

O. *ornithorhynchum;* pseudobulbis ovatis diphyllis, foliis ensiformibus recurvis scapo paniculato brevioribus, sepalis lineari-oblongis undulatis reflexis omninò liberis, labelli panduriformis lobis lateralibus acutis intermedio bilobo, cristâ e lamellis 5 crenatis apice rostratis constante, columnæ alis cuneatis dentatis, stigmate longi-rostrato.

O. ornithorhynchum. *Humboldt, Bonpland, & Kunth. Nov. gen. et sp. plant. I.* 345. *t.* 80. *Genera & Species Orchid.* 204. *Bateman Orchid. Mex. et Guatemal. t.* 4.

O. roseum. *Hort.*

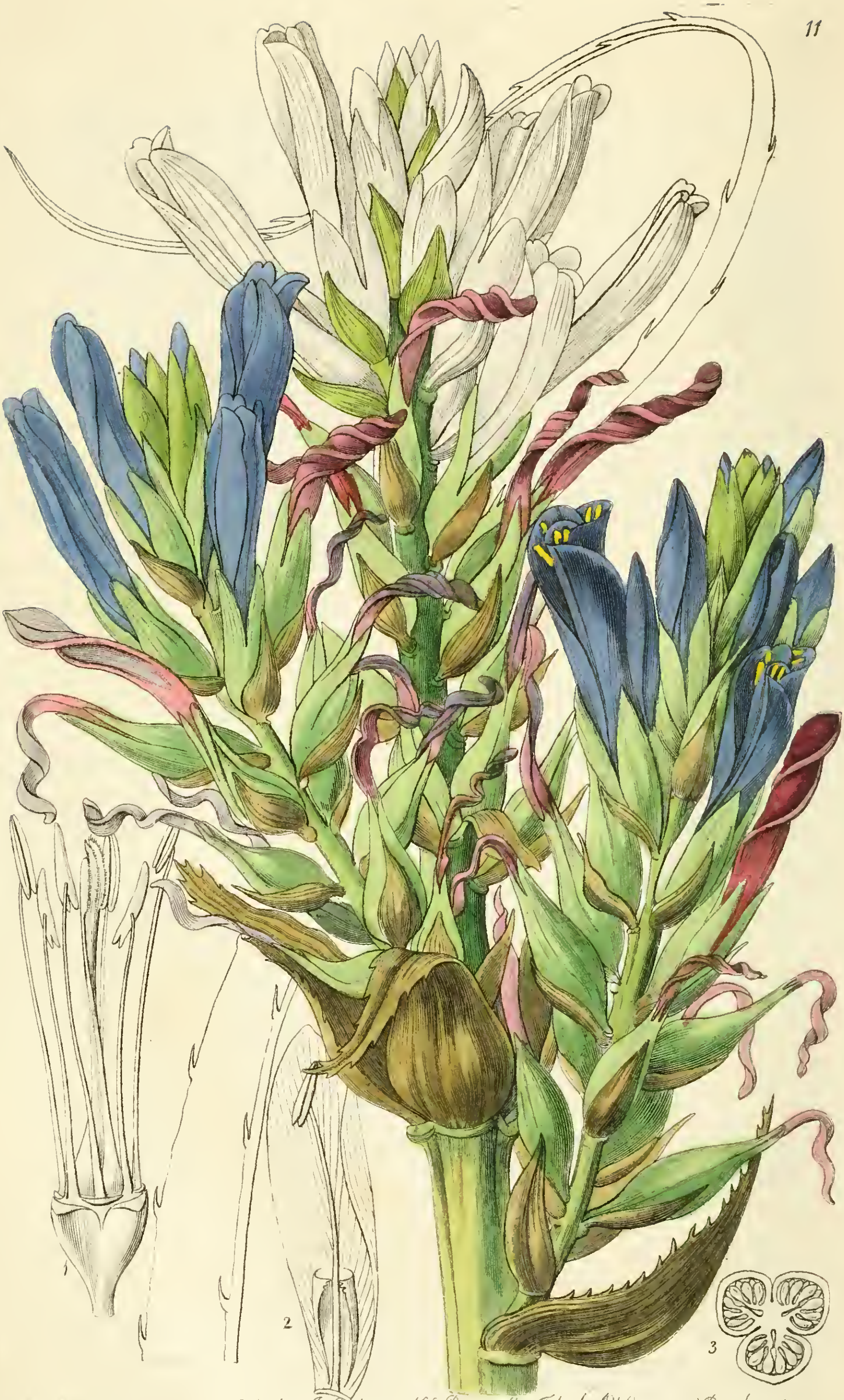
This beautiful epiphyte was originally found by Humboldt and Bonpland in the temperate parts of Mexico, near El Puerto de Andaracuas, between the towns of Guanaxato and Valladolid de Mechoacan, on mountains, at the elevation of 6,000 feet above the sea, flowering in September. It has also been met with by Mr. Hartweg, at a place called Llano Verde, loaded, in the month of July, with larger and finer flowers than I have yet seen in our garden specimens. Mr. Skinner again found it in Guatemala, and sent it to Mr. Bateman, who published the first figure from living plants in his magnificent work on the *Orchidaceæ of Mexico and Guatemala*, t. 4.

In their natural state the panicles of rosy flowers are pendulous, and extremely ornamental; their beauty is much impaired when they are tied up to a stake, and so forced into a position alien to their habits. They have an agreeable odour, which Mr. Bateman compares with justice to new hay.

In this species we have another instance to add to those of *O. Russellianum*, *Lanceanum*, and *pulchellum* of violet flowers in a genus so very generally yellow. In the coloured copies of Humboldt's genera and species they are really made yellow; which should be a warning to all Botanists how they judge of the colours of flowers from dried specimens.

At the upper left-hand corner of the accompanying plate is a magnified view of the anther, from which the specific name of bird-billed has been taken, and with it the toothed wings of the column, and the peculiar crest of the lip, which forms one of the most prominent characters of the species.

It must have the temperature of the stove, and succeeds best if suspended from the roof upon a block of wood. In this situation its flowers hang down and look very graceful. When the roots are thrown out for nourishment they must be freely syringed, and preserved from wood-lice or other insects. It must have a period of rest, and at that time it should be kept cool and dry.



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PŪYĂ cœrŭlĕă.

Blue Puya.

HEXANDRIA *TRYGYNIA*.

Nat. ord. BROMELIACEÆ.

PUYA Molina. Sepala subæqualia, mox convoluta. *Petala* infernè convoluta, basi appendiculata, mox spiralia. *Stamina* inclusa; antheræ lineares, basi emarginatæ. *Ovarium* semisuperum, *stigmatibus* linearibus spiraliter convolutis. *Capsule* supera, cartilaginea, loculicido-trivalvis; *semina* atra, compressa, marginata.

P. *cœrulea;* foliis linearibus acuminatissimis spinoso-dentatis glabriusculis, scapo paniculato, floribus pedicellatis bracteis oblongis concavis membranaceis acuminatis longioribus, petalis plumbeo-cœruleis obtusis sepalis multò longioribus.

Pourretia cœrulea. *Miers' travels in Chile, p.* 530. absq. descr.

Folia *2-pedalia, canaliculata, subtùs obsoletè furfuracea.* Scapus *3-4-pedalis, foliis in vaginas membranaceas serratas mutatis arctè imbricatus.* Bracteæ *membranaceæ, spathaceæ, infimæ serratæ, superiores inermes, flores pedicellatos imbricantes.* Sepala *ovata, herbacea, corollâ plus duplò breviora.* Petala *oblonga, obtusa, convoluta, basi squamâ staminis basin amplectante aucta; post anthesin convoluta et in colorem roseum mutata.* Stamina *alterna breviora; ea petalis opposita longiora;* antheris *linearibus basi sagittatis.* Ovarium *semisuperum, 3-loculare, polyspermum; placentis didymis; stylus tripartibilis;* stigmatibus *unilateralibus convolutis.*

A specimen of this singular plant was exhibited in 1838, at one of the meetings of the Horticultural Society in Regent Street, by Mr. Lambert, under the name of *Pourretia cœrulea.* I am informed by that gentleman that it is the species so called by Mr. Miers, and that he has cultivated it, with *Pourretia coarctata*, a finer plant, having stems seven or eight feet high, each bearing several hundred flowers, and *P. rubricaulis*, in a greenhouse nearly filled with them.

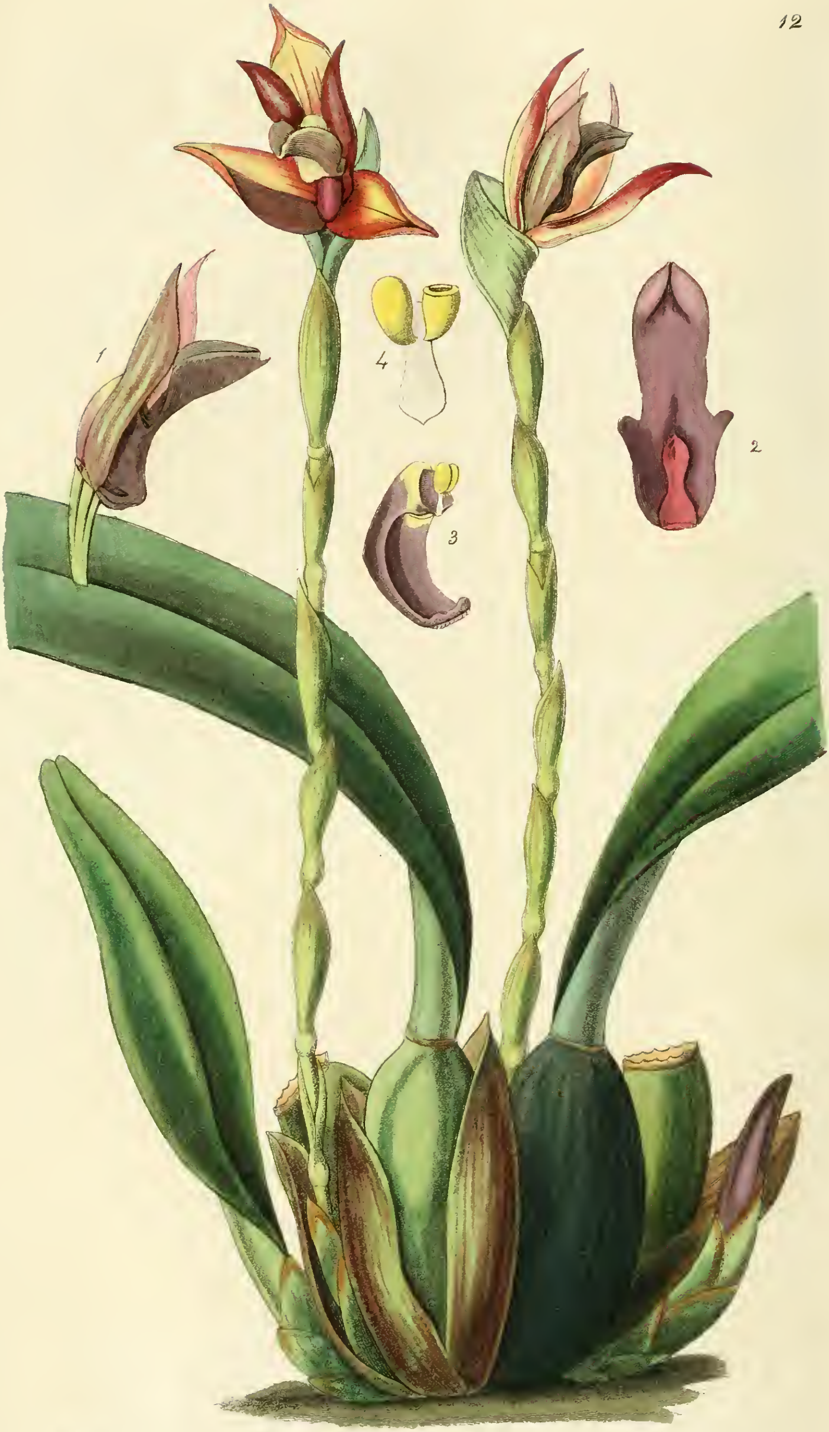
From PUYA, the *Pourretia* of the Flora Peruviana, as defined by the younger Schultes, in his revision of the Bromeliaceous order, in Römer and Schultes' Systema Vegetabilium, it differs in its ovary being only half superior, in having scales at the base of the petals, and in its calyx not becoming convolute after flowering; but I have no doubt that the character assigned to Puya in the above work is erroneous, and requires emendation. The ovary is half inferior like that of a Pitcairnia; but the capsule is almost wholly superior, and this is one of the more material characters of Puya.

It is a showy half-hardy perennial, looking like a narrow-leaved Pine-apple, and a few years since was common in collections, but so many specimens were destroyed in the severe winter of 1837-8, that most persons lost it, and it will now be necessary to procure seeds again from Valparaiso, where it is probably common. If not injured by frost, it will grow in the poorest soil, and the driest situations, and would form a most picturesque ornament of rough rocky banks in the warmer parts of England and Ireland.

I am not aware of the quality of the fibre contained in its leaves, but from their toughness, and its relation to the plants that yield Pita, and New Zealand flax, it is probable that it would be worth examination in this respect.

There seems no reason for preferring the generic name Pourretia to the more ancient Puya of Molina.

12



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MAXILLĀRĬĂ cucullātā.

Hooded Maxillaria.

GYNANDRIA *MONANDRIA.*

Nat. Ord. ORCHIDACEÆ, § VANDEÆ.
MAXILLARIA. *Botanical Register, vol.* 11. *fol.* 897.

§ 2. SCAPIGERÆ; *scapis radicalibus imbricatìm squamatis unifloris.*

M. *cucullata;* pseudobulbis ovalibus compressis monophyllis, folio lato scapis longiore, vaginis imbricatis inflatis, bracteâ cucullatâ ovario longiore, sepalis ovatis acuminatis erectis, petalis conformibus paulò minoribus, labello oblongo carnoso trilobo petalorum longitudine: lobis lateralibus nanis intermedio elongato obtuso apice incrassato apiculato, callo disci spathulato loborum lateralium longitudine.

A native of equinoctial America, whence it is said to have been brought by Mr. Henchman. For my specimens I am indebted to His Grace the Duke of Devonshire, who ordered them to be sent from Chatsworth in September, 1838. The species is one of the less interesting of the genus, and in its habit and general appearance approaches the Trigonidia. It belongs to a rather large section of true Maxillarias, characterized by their peduncles being constantly one-flowered, densely clothed with scale-like sheaths, and proceeding immediately from the base of the pseudo-bulbs which lie upon the earth.

Of this section several have been defined in the *Genera and Species of Orchidaceous Plants,*[*] and others have appeared in Pöppig and Endlicher's *Nova Genera et Species Plantarum,* so that among my collections of unpublished plants belonging to the Vandeous section of Orchidaceæ I find only one to add. That one is a native of Mexico, where it was first found by Count Karwinski, at Teoxomulco, near Oaxaca.

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[*] I am happy to state that a sixth part of this work, comprehending *Arethuseæ, Gastrodieæ,* and *Vanilleæ,* is in the printer's hands, and may be expected in about a month.

As I believe it exists in this country in a living state I subjoin* its character, taken from specimens given me by Mr. Bateman, and from others in the herbarium of Dr. von Martius.

Fig. 1. shews the petals and labellum, seen from one side; 2. is a view of the labellum from the inside; 3. is the column, with the pollen-masses adhering to the apex; 4. are the pollen-masses themselves, placed considerably below the upper end of their caudicula.

In cultivating this species great care must be taken not to let too much water into the scales of the young shoots, for it is very apt to rot them, and so spoil the pseudo-bulbs. The temperature of the stove in which it is grown should be kept low in the cold and cloudy weather of winter, and gradually raised as spring advances. In fact it is very unnatural, and highly injurious to grow plants of this kind in a temperature of 70° or 80° in the dull weather of winter, for it is applying the stimulus of heat without the corresponding action of light.

It should be potted in brown turfy peat well mixed with drainage, and treated generally as other plants of this kind.

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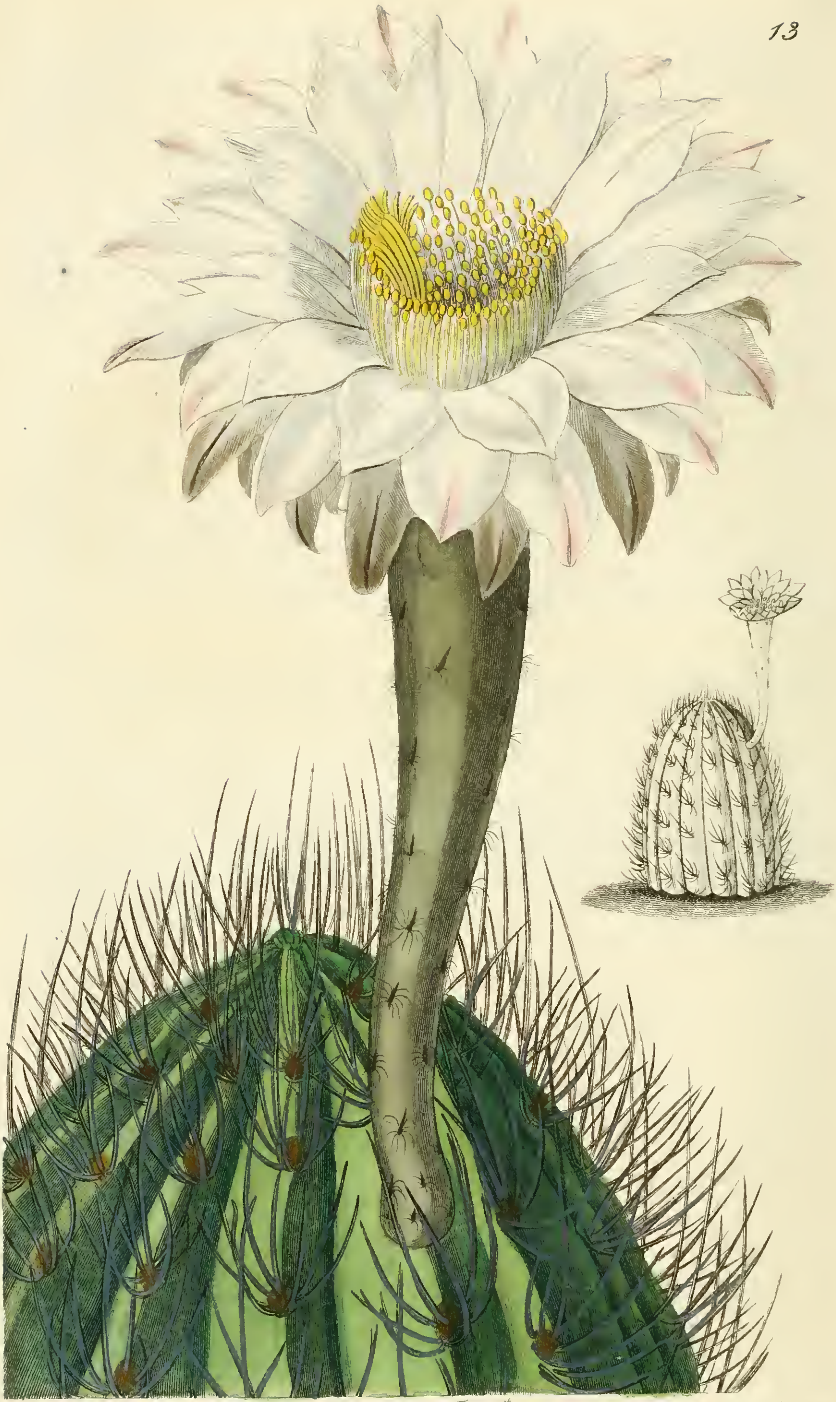
* Maxillaria *rhombea;* acaulis, pseudobulbis ovalibus ancipitibus, foliis . . . . . , vaginis acutis carinatis, bracteâ ovario æquali, sepalis petalisque acutis, labello subrhombeo-trilobo: laciniâ intermediâ oblongâ apiculatâ medio exaratâ lateralibus nanis rotundatis appendice planâ retusâ longioribus.——Mexico, Oaxaçæ, *Karwinski.*

13



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CĒRĔŬS leucānthŭs.

White Torch-thistle.

ICOSANDRIA *MONOGYNIA.*

Nat. ord. CACTACEÆ.

CEREUS. Botanical Register, vol. 4. *fol.* 304.

C. *leucanthus;* caule conico multangulari, costis obtusis, spinis 9-13 validis subulatis patentibus fusco-griseis unico centrali subæqualibus: lanâ brevissimâ, squamis tubum floris vestientibus minimis basi radiatim pilosis, sepalis petalisque acutissimis staminibus multò longioribus.
C. leucanthus. *Pfeiffer Cact. p.* 74.
Echinocactus leucanthus. *Gillies.*

This fine plant was originally received by the Horticultural Society from the late Dr. Gillies, who found it in Chili; it flowered in the Society's garden for the first time in 1831, when its blossoms had not gained their full size, and again in August 1836, at which time they had acquired the beautiful form and colour now represented.

The specimen in question is now between nine and ten inches high, seven inches in diameter at the base, whence it tapers away till its diameter is not more than three or four inches. It has seventeen ribs at the base, and twenty-two at the top, which are obtuse, and a little wavy, but gradually disappear altogether near the ground, where the stem becomes round. The spines are brownish when young, and spring from the midst of a quantity of brown wool, which becomes grey with age, and at last disappears; when full with from 9 to 13 in an outer row, and one in the centre, grown they are rather more than an inch long, dull grey, stiff, terete, a little curved right and left from the centre, which is straighter, but scarcely longer than the others. The flowers are six inches long, pure white inside, but dull olive green on the outside and on the top, with a tinge of pink at the points of the sepals and outer petals. The apex of the plant is so closely covered with wool as to look not a little like a Melocactus.

March, 1840.

The most healthy plants of this species are those which are either raised from seed in this country, or imported when small and in a growing state. Whenever the seed is ripe it should be sown in sand and placed on a warm dry shelf; it will vegetate freely, and the seedlings should have very little water. They will root well in the sand, and need not be potted until they are pretty strong plants. The best soil for potting is loam, peat, and brick rubbish, but it should never be very rich, and the pots must be well drained.

The practice of growing plants of this kind in dung or tan frames has been very much eulogised, and some specimens which have been sent from the continent to this country, reared in this manner, were certainly healthy and beautiful. Those who adopt this system in summer, must however take care to remove their plants into a dry atmosphere before the approach of winter, or they will be very apt to lose some of their finest specimens.

The present species will live in any cool dry atmosphere a few degrees above the freezing point in winter, but will not grow or flower under a temperature of 55° or 60°.

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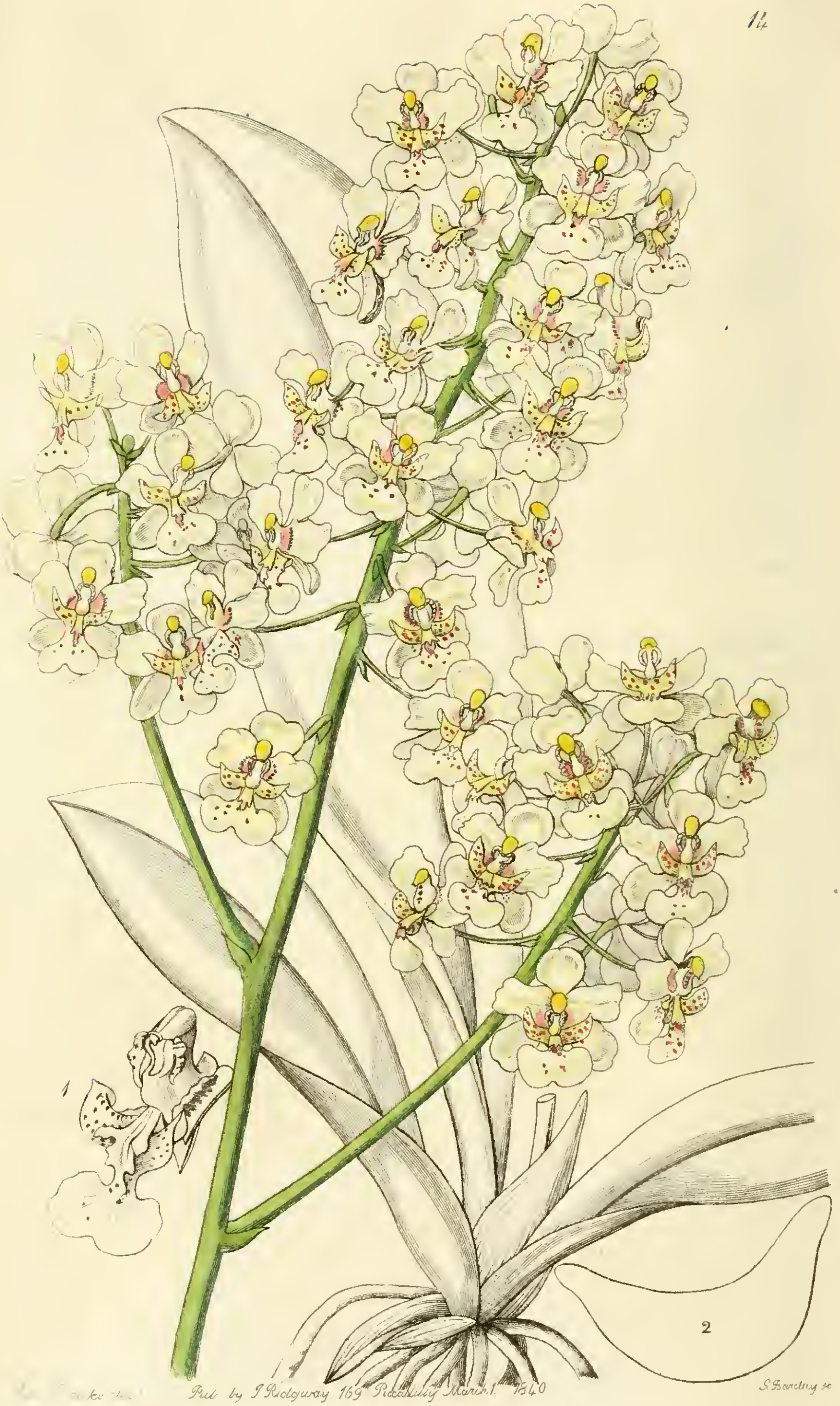

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ONCĪDĬŪM stramĭnĕūm.

Straw-coloured Oncidium.

GYNANDRIA *MONANDRIA.*

Nat. òrd. ORCHIDACEÆ, § VANDEÆ.
ONCIDIUM. *Botanical Register, vol.* 9. *fol.* 727.

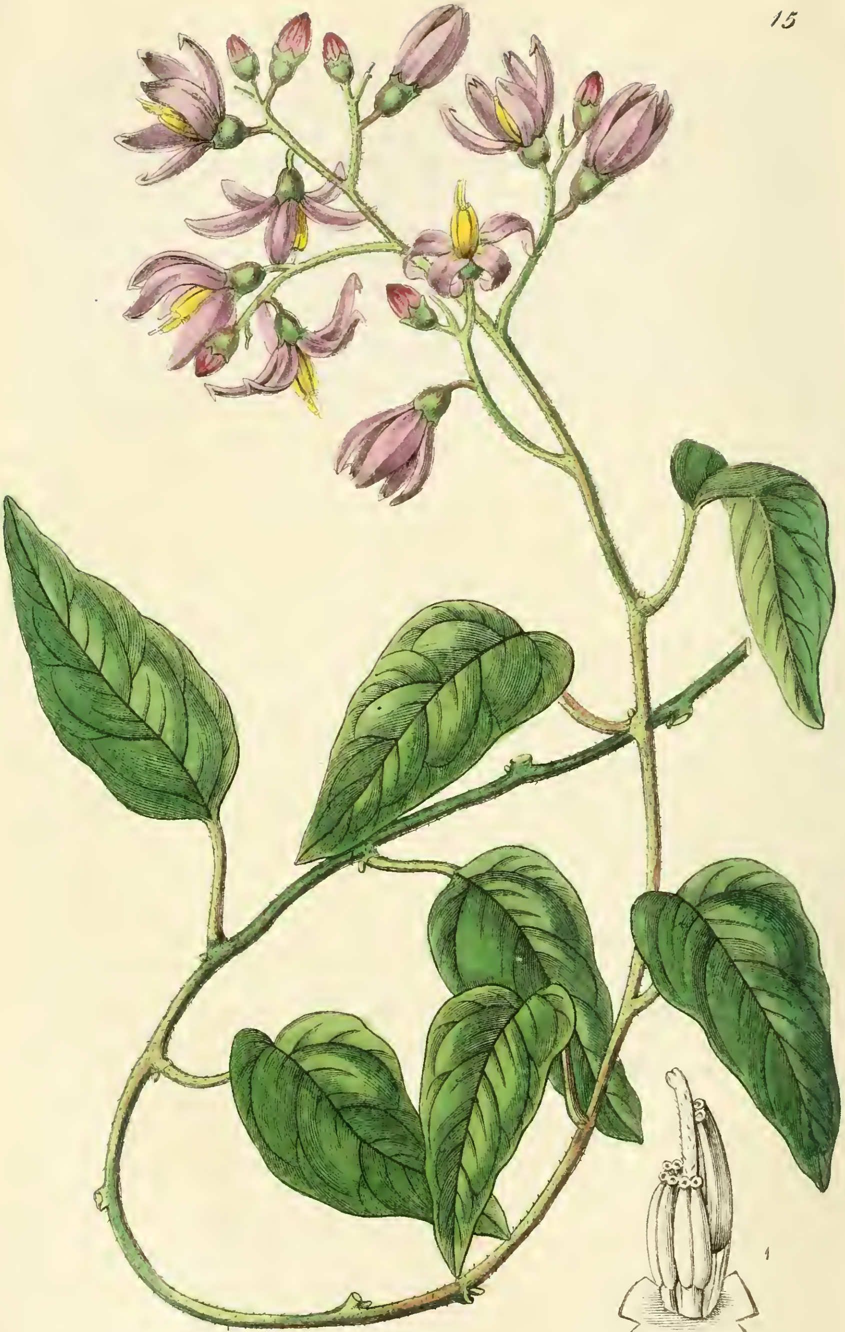
O. *stramineum;* ebulbe, foliis crassis carnosis ovato-lanceolatis acutis dorso rotundatis scapo paniculato rigido erecto brevioribus, sepalis subrotundis unguiculatis concavis liberis integerrimis, petalis duplò majoribus oblongis obtusis emarginatis margine crispis, labelli lobis lateralibus oblongis carnosis acutis margine revolutis basi columnæ proximâ nectariferis intermedio reniformi plano emarginato longioribus, tuberculis disci 4 geminatis, columnæ alis carnosis linearibus obtusis elongatis genuflexis decurvis. *Bot. Reg.* 1838. *misc. no.* 63.

Of this pretty species a short account has already been given in this work among the miscellaneous matter for the year 1838. It was one of the first plants sent from Vera Cruz to the Horticultural Society by Mr. Hartweg, who found it at a place called Zacuapan, where some other fine things, especially the rare and beautiful Berberis tenuifolia, were obtained.

This species is readily known when out of flower by its rigid fleshy unspotted leaves, rounded, not keeled, at the back. When in flower the stiff panicles, and pale straw coloured blossoms, smelling slightly of primroses, together with the peculiar form of the wings of the column, and the almost orbicular sepals, offer sufficient means of recognition.

Fig. 1. represents the lip and column, the latter with the narrow falcate deflexed wings peculiar to this species; fig. 2. is a transverse section of a leaf to show its thickness and peculiar form.

O. stramineum will not submit readily to the same treatment as is given to the West Indian species of this genus. It is injured by that degree of heat in which they flourish; the leaves which it forms under it are small, and the flowers in many cases are not fully developed. It is a curious fact that two plants—one in the garden of the Horticultural Society, and the other in the collection of George Barker, Esq., of Birmingham—threw up flower stems, which instead of producing flowers formed leaves ; and this was probably owing to over excitement, for, another plant which was generally kept at the coolest end of the stove was always healthy, and perfected flowers in abundance. It may either be potted or suspended upon wood from the rafters of the stove, where it does not require so much water as the free-growing species, but it may be frequently syringed in the growing season with good effect.



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SOLĀNŪM uncinĕllūm.

Hook-petalled Solanum.

PENTANDRIA *MONOGYNIA.*

Nat. ord. SOLANACEÆ.

SOLANUM. Botanical Register, vol. 1. *fol.* 72.

S. *uncinellum* (NYCTERIUM); inerme, herbaceum, foliis integerrimis ovato-lanceolatis subcordatis obsoletè pubescentibus, paniculâ terminali, calycibus campanulatis 5-crenatis, corollæ laciniis apice uncinatis, antheris apice biporosis alterâ productiore.

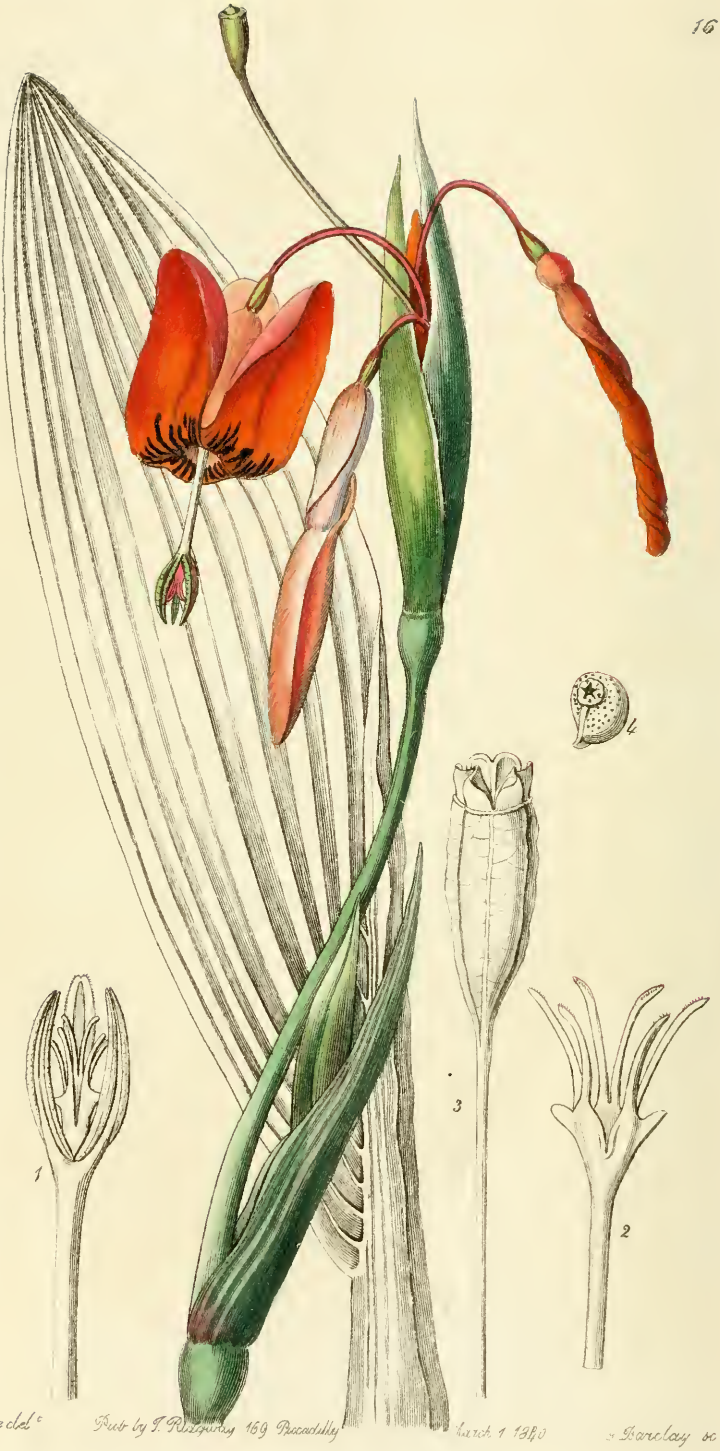
Caules *decumbentes, herbacei, obscurè pubescentes, filiformes, virides.* Folia *alterna, ovato-lanceolata, basi subcordata, leviter pubescentia, integerrima,* 2 *pollices longa, petiolo suo duplò longiora.* Panicula *terminalis, simplex, ramis subtrifloris.* Flores *rosei.* Calyx *campanulatus, dentibus* 5 *brevibus rotundatis.* Corolla *demùm patens imò revoluta, æstivatione inflexo-valvari, laciniis apice uncinato-inflexis.* Antheræ *liberæ, apice biporosæ, conniventes sed nullo modo cohærentes; alterâ cæteris ob filamentum longius productiore.* Stylus *pubescens;* stigma *obscurè* 2-*lobum.*

This plant flowered in the year 1837 in the garden of the Horticultural Society, in the month of July, but having been subsequently destroyed by the severe winter of 1837-8 its history was lost with it, and search has in vain been made for it in books. It was a pretty decumbent pink-flowered herbaceous plant, perhaps an annual, and appeared very different from any thing in the collections of this country.

If the genus Nycterium is to be preserved, and the singular elongation of one anther is a peculiarity deserving of consideration, then the present plant will belong to it.

In some respects it approaches the *S. loxense* of Dunal, but that species is not said to be a Nycterium; in other circumstances it would seem referable to the vicinity of *S. lycioides* and *caudicans*, but the habit of those plants is by no means that of the plant before us.

Fig. 1. represents the stamens, the principal part of the corolla having been cut away.



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RIGIDĒLLĂ flāmmĕă.

Flame-coloured Stiff-stalk.

MONADELPHIA *TRIANDRIA.*

Nat. ord. IRIDACEÆ.

RIGIDELLA. *Folia* equitantia, plicata, vaginantia. *Flores* fasciculati, terminales, intra spatham bivalvem; *pedunculi* sub anthesi decurvi, mox fructu maturescente strictissimè erecti. *Perianthium* triphyllum; foliolis basi imbricatis, convolutis, infra medium constrictis, limbo concavo revoluto, post anthesin spiraliter tortis. *Stamina* 3, in tubum exsertum connata, *antheris* tantum linearibus, erectis, liberis. *Stigmata* 3, bipartita, dorso appendiculata, antheris opposita; laciniis linearibus, apice papillosis. *Capsula* papyracea, apice 3-valvis, polysperma. *Semina* subglobosa, punctata, raphe et chalazâ conspicuis.

Rigidella *flammea.*

This very pretty plant was found by Mr. Hartweg in the earlier of his excursions in Mexico, and was by him sent to the Horticultural Society, where it proves to be of easy cultivation, requiring exactly the same treatment as a Tigridia.

It grows from three to five feet high, with broad equitant strongly plaited leaves, which are dilated at the base where they sheath the stem. The flowers grow in a dense umbel from within a two-valved spathe, and open singly day by day; they are drooping, and of a bright flame colour, with a companulate tube, and a reflexed limb strongly marked at the base with short deep purple stripes. After flowering, the stalks, which are long and slender, become erect, and so rigid as to bear the seed vessel perfectly erect, even when gravid with seeds; from which circumstance the generic name has been contrived.

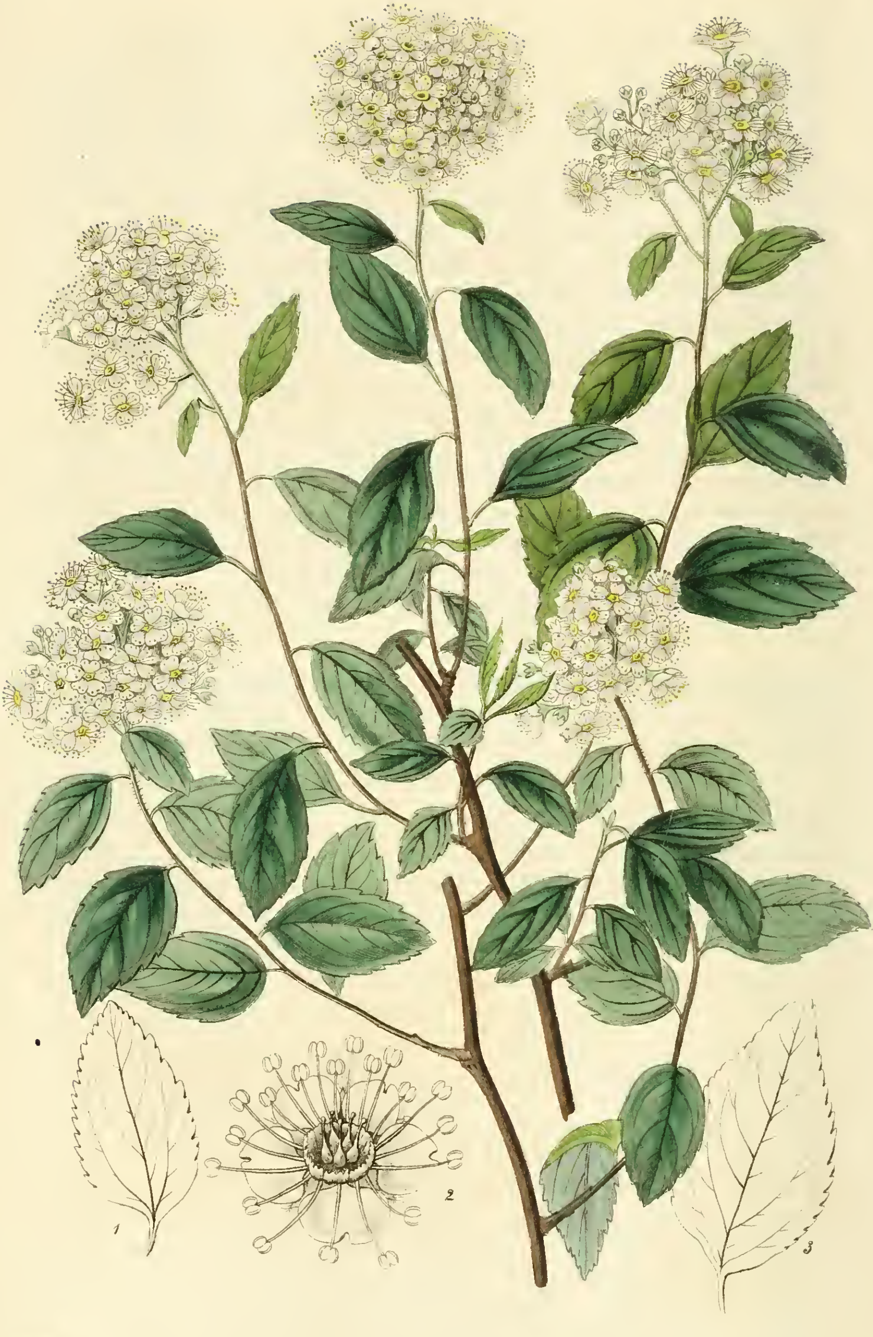
Upon submitting the drawing to the Hon. and Rev. Wm. Herbert, who is now making this subject his peculiar study, that gentleman favoured me with a note, of which the following is an extract.

" Rigidella flammea appears to me to be a very singular plant, widely removed from any known genus. Its capsule conforms closely with that of Tigridia, though the seed is different; and in the structure of its stamina and style it approaches that genus, but differs from all the uncrested genera I have observed in having an anterior space at the point where the stigma-lobes diverge. This anterior space, which by the drawing appears to be entire, and not divided or eroded in conformity with the lobes, occupies nearly the position (though placed rather higher) of the true stigma in the genera, which, like Iris, Marica, and Cypella, have posterior crests. The perianth is no less remarkable, being as it seems tubeless, and consisting of three sepals with reflex laminæ, of which the ungues appear to be strangely convolute, and the petals absolutely deficient. We are accustomed to the diminution and distortion of the three petals in some of the Cape Iridaceæ, to their being nearly deficient in *Iris tridentata,* and reduced to a mere bristle in *I. setosa*, which is *brachycuspis* of Bot. Mag., but I know no instance of their being absolutely deficient."

At present this plant is exceedingly rare, but as a few seeds were ripened last year in the Horticultural garden, it is to be hoped that plants will be ready in the course of the summer to give to the Fellows of the Society.

Fig. 1. is a view of the column of stamens, and of the stigma as it is seen between the anthers; 2. represents the stigma itself; 3. is a ripe capsule, and 4. a ripe seed, turned so as to bring the raphe and distended chalaza into view.

17



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SPIRǢĂ vacciniĭĭfŏlĭă.

Bilberry-leaved Spiræa.

ICOSANDRIA *PENTAGYNIA*.

Nat. ord. Rosaceæ.

SPIRÆA. Botanical Register, vol. 15. *fol.* 1222.

S. *vacciniifolia* (Chamædryon); ramulis filiformibus pubescentibus, foliis ovatis serrulatis v. duplicato-serratis basi integerrimis, subtùs glaucis, paniculis terminalibus densè corymbosis tomentosis, toro denticulato.

S. vacciniifolia. *Don prodr. fl. nep.* 227. *DC. prodr. v.* 2. 546. *Bot. Reg.* 1839. *misc. no.* 88.

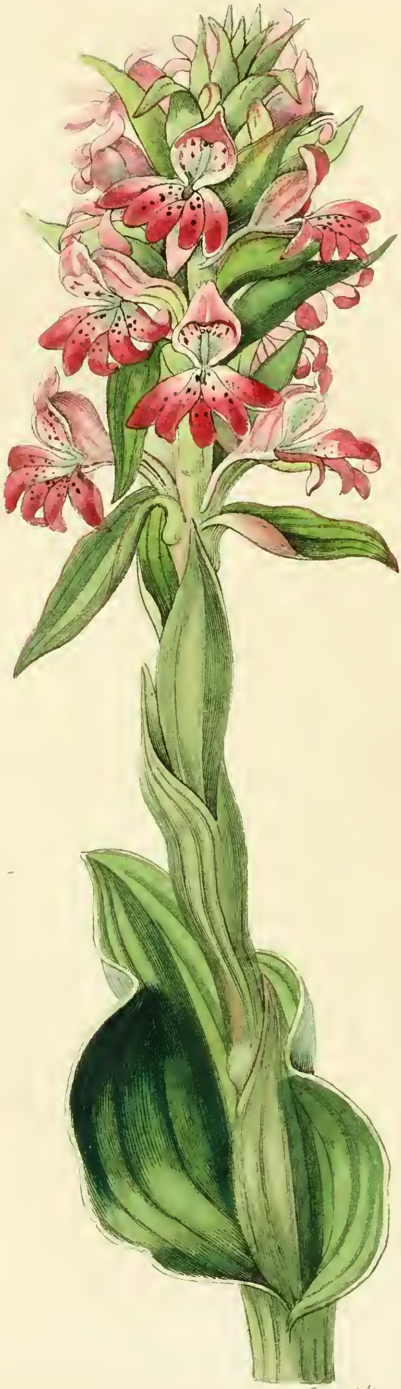
Frutex *debilis,* 1-3 *pedes altus, ramis glabris, ramulis filiformibus pubescentibus.* Folia *ovata, plana, serrata, nunc ferè integra, basi semper integerrima, subtus glauca, petiolo venisque primariis rufescentibus; maxima pollicaria.* Paniculæ *terminales, tomentosæ, corymbosæ; ramis in capitulum quasi aggregatis.* Calycis laciniæ *ovatæ, acutæ,* petalis *albis, subrotundis, emarginatis integrisve, concavis breviores.* Stamina 20, *petalis longiora, extra tori marginem elevatum, liberum, denticulatum inserta.* Ovaria 5, *libera.*

A Nepal shrub, introduced by Professor Royle, who presented its seeds to the Horticultural Society in the year 1835. It is a very pretty species, almost as hardy as a Gueldres Rose, its branches having been little injured even in the severe winter of 1837-8; it grows from one to three feet high, prefers an American Border, and strikes freely from cuttings of the half-ripened wood.

The Society possesses two varieties of it, of one of which figs. 1. and 2. in the accompanying plate represent a leaf and flower, while fig. 3. is a leaf of the other. Of these the latter is much more slender and dwarf, and rather more tender than the other, but there are scarcely any further differences between them.

The *S. vacciniifolia* of the Botanical Cabinet, t. 1403, is apparently *S. laxiflora*, rather than the species now figured.

18



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18

SATY̆RĬŪM pustulātūm.

Pustular Satyrium.

GYNANDRIA *MONANDRIA.*

Nat. Ord. ORCHIDACEÆ, § OPHRYDEÆ.

SATYRIUM. Botanical Register, vol. 5. *fol.* 416.

S. *pustulatum;** foliis binis radicalibus cordato-orbicularibus planis papillosis, vaginis caulis appressis apice acutis foliaceis patentibus complicatis, spicâ oblongâ obtusâ multiflorâ, sepalis linearibus convexis recurvis obtusis petalisque conformibus minoribus patulis, labello oblongo acuto margine revoluto dorso cristato apice subcrispo recurvo: omnibus altè connatis, calcaribus ovario paulò brevioribus. *Lindl. genera et sp. orch. p.* 341.

S. pustulatum. *Lindl. in Bauer's Illustrations of Orchidaceous Plants, t.* 12. 13. 14. Fructification.

A native of the Cape of Good Hope, whence it was received at the Royal Botanic Garden at Kew so long since as the year 1800, when Mr. Bauer prepared the beautiful drawings which form the subject of the 12th, 13th, and 14th plates of Fructification in the *Illustrations of Orchidaceous plants.* It does not however appear to have been noticed by any systematical writer until it was introduced into the *Genera and Species of Orchidaceous plants.* Its name has been given in consequence of the leaves appearing as if covered with watery pustules. The flowers smell like the delicious *Sweet Vernal Grass* of our meadows.

Sir John Herschell found it growing in the Cape Colony in clayey places, baked hard by the sun, and never in sandy soil; according to Drège however it occurs on the sand-hills near Saldanha Bay, as well as on the Camiesbergen, and near the villages of Donkerhoek and Liefde.

Nothing is more vexatious to lovers of flowers than the difficulty of preserving the terrestrial species of Orchidaceæ found at the Cape of Good Hope, where there are great numbers of such plants of the gayest colours and most singular forms. They live indeed for a year or two after their arrival, but then perish, from debility brought on by some mismanagement in their cultivation, the nature of which is not understood. Some very valuable hints relating to this matter have been given by Sir John Herschell, in a communication published in the *Proceedings of the Horticultural Society, vol.* 1, *p.* 56; among which the following relates to the subject of this notice, which was flowered by that distinguished individual, by whose permission the accompanying figure was made.

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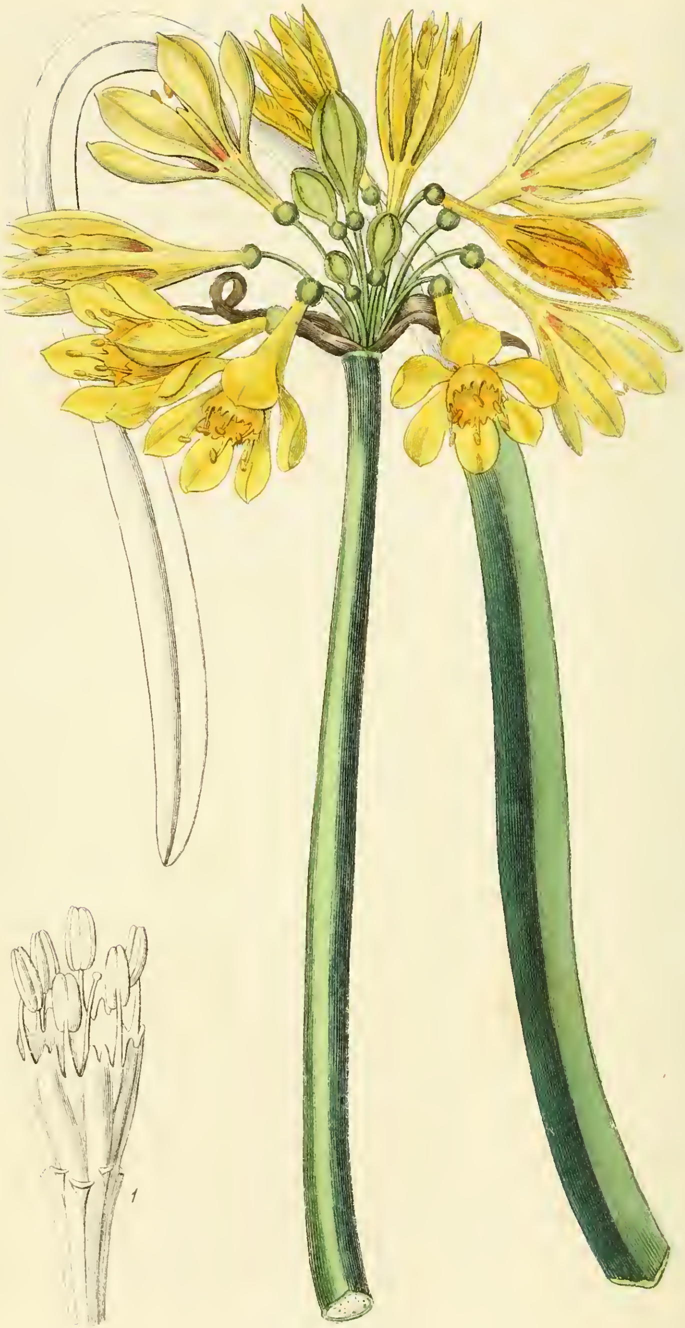
* This is printed papillosum, by an accidental oversight, in the work here referred to.

"I have never found this in the sandy flats about the Cape. My roots were all taken from *clay*, baked by the sun nearly to the consistence of a brick, at 'De Koch's,' a place about 40 miles east of Cape Town, in the district of 'Hottentot's Holland.' They were then in flower, rather past their maximum. Nevertheless they grew well enough in the peaty-sand of which my garden consisted, and to admiration in a fine black sand enriched with vegetable matter, from the shrubby hills in the neighbourhood. Plenty of water and moderate temperature while leafing, diminished supply of wet and increased heat as the flower rises, and total dryness *with heat*, when all is withered, seem to be the conditions."

Practically the cultivation of Cape Orchidaceæ has always been found extremely difficult in this country. The best method of cultivating the present species is to plant it out in a pit, with a south aspect fully exposed to the sun's rays at all seasons of the year. The pit must be well drained, and the soil should consist of peat well mixed with sand and leaf mould. A great deal of harm may be done by injudicious watering. When it is not growing it should be kept perfectly dry; as soon as it begins to push through the soil a little water may be given, not amongst the leaves, for this will probably injure them, but round the tubers; this may be gradually increased as the plant grows, until the flower-stem makes its appearance, when water must be discontinued. Heat and light are now the agents which will perfect the flower, and ripen the tubers for the following year.

When propagation is attempted it must be done when the tubers are ripe, and the plant in a state of inaction.

Those who have not pits to grow this plant in, may be equally successful by cultivating it in pots, if the above suggestions are attended to.



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CALOSTĔMMĂ lŭtĕūm.

Yellow Calostemma.

HEXANDRIA *MONOGYNIA.*

Nat. ord. AMARYLLIDACEÆ.

CALOSTEMMA. Botanical Register, vol. 5. fol. 421.

C. *luteum;* foliis contemporaneis flaccidis ensiformibus viridibus scapi longitudine, tubo perianthii limbo breviore, coronæ dentibus interjectis bifidis filamentis brevioribus, umbellis densis, pedicellis inarticulatis subæqualibus.

C. luteum. *Bot. Mag. t.* 2101. *Supra t.* 421.

Although a figure of this species has already been given in an early volume of the present work, yet it seems desirable to reproduce it, partly for the sake of showing more correctly its exact structure, and partly because of its rarity.

It, and all the species, of which five are now on record, is an inhabitant of New Holland, whence bulbs are from time to time imported. They differ not only in the colour of the flowers, which are yellow, red, pink, and white, but in the relative length of the pedicels, in the presence or absence of an articulation in those parts, and in the form of the toothings found between the stamens.

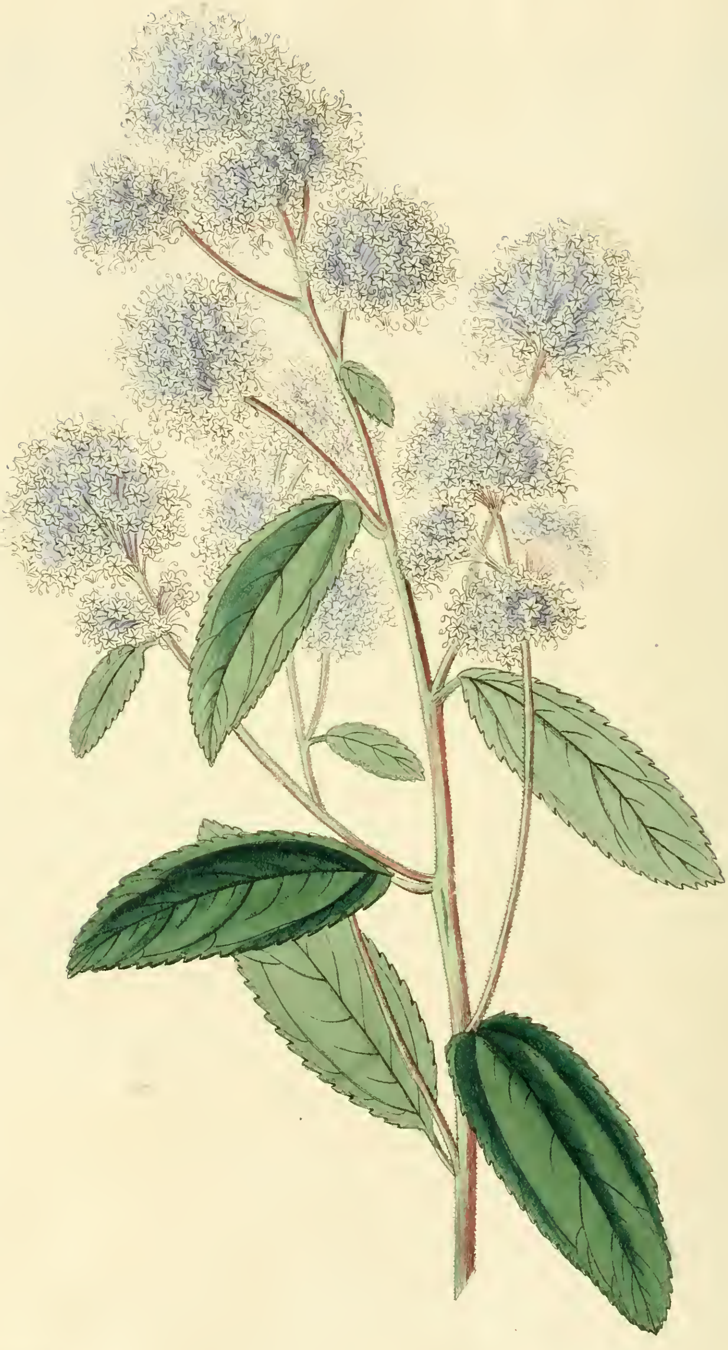
One of them at least, *C. candidum,* is said to be fragrant. That now figured, which flowered in September, 1839, in the garden of the Horticultural Society, from bulbs collected upon the plains of the Lachlan in April, 1836, by Major Sir Thomas Mitchell, had a strong smell of mint.

It is not quite so hardy as bulbs from the Cape of Good Hope, being liable to be injured in a cold frame by the frost and damp in winter; and therefore the best plan of cultivation is either to plant it out in the border of a conservatory, or to grow it in a pot in the greenhouse. It is by no means difficult to make it grow freely, but there is considerable difficulty in inducing it to flower. This can only be done by taking a lesson from nature, which in all cases is the surest guide in cultivation. The growth of this plant like that of most others is periodical; after it has perfected its flowers and leaves it gradually sinks into a state of repose until the season of growth comes round again, when it pushes up its leaves and its flowers if in health. Water therefore freely whenever the plant shews signs of growth, and go on until it has perfected its leaves; but discontinue watering as soon as the leaves begin to look yellow, and shew signs of decay.

The best soil to grow it in is peat, loam, and sand. It may be propagated by seeds.

ERRATUM.

Tab. 16, second page, line 6, *for* anterior space *read* anterior spur.



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CEANŌTHŬS pāllĭdŭs.

Pale-flowered Ceanothus.

PENTANDRIA *MONOGYNIA*.

Nat. ord. RHAMNACEÆ.

CEANOTHUS. *Botanical Register, vol.* 4. *fol.* 291.

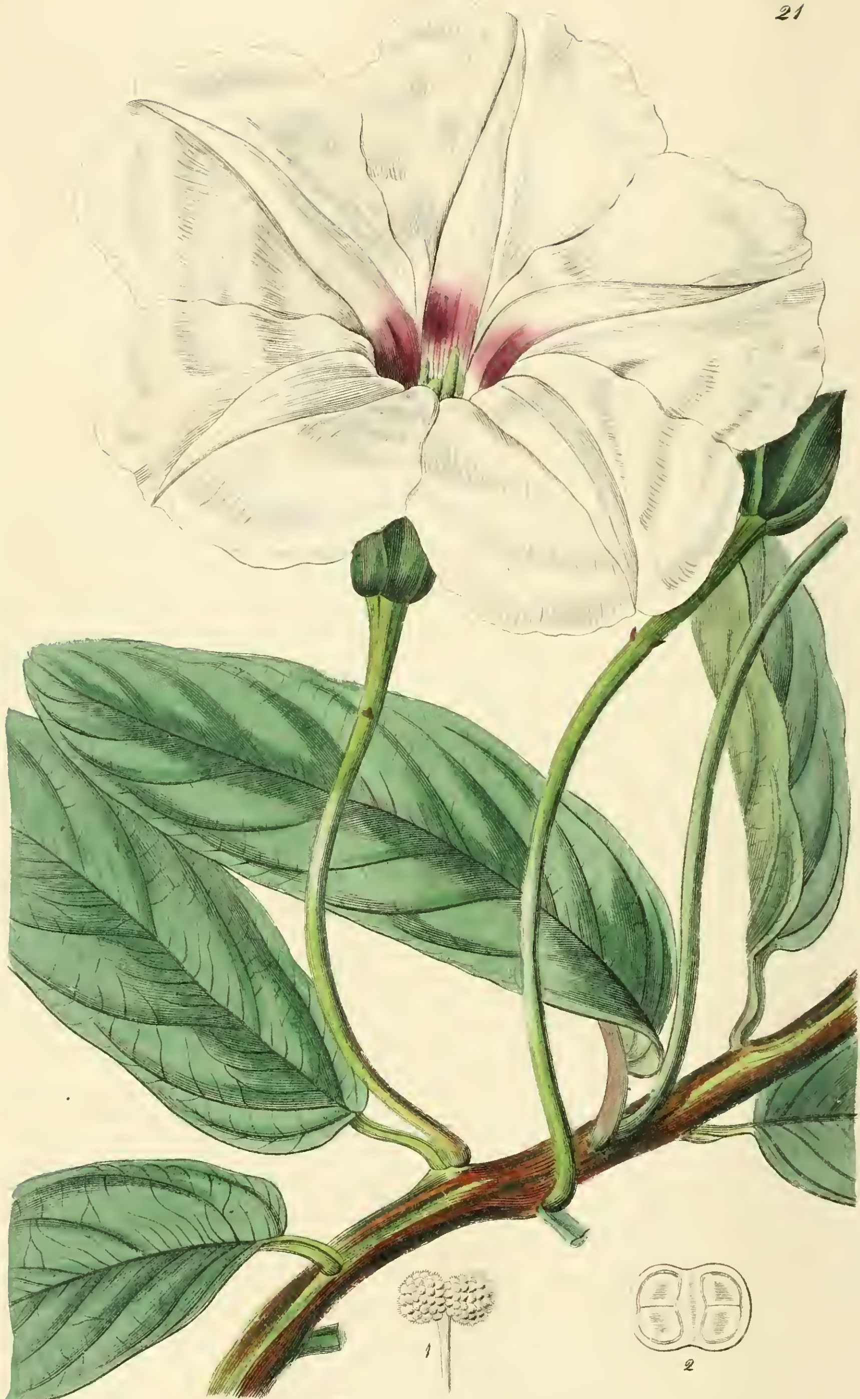
C. *pallidus;* caule arborescente ramis ramulisque pubescentibus teretibus, foliis triplinerviis ovalibus serratis supra glabris nitidis subtùs viridibus pubescentibus, floribus thyrsoideo-paniculatis: pedicellis capitato-corymbosis pilosis.

This plant occurs in the gardens under the name of *Ceanothus ovatus* and *thyrsiflorus*, from both which it is certainly distinct. The first is a mere variety of *Ceanothus americanus*, and the latter is a Californian tree with deep-blue flowers, and very strongly angular branches. It approaches more nearly to the lovely *C. azureus*, but its leaves are green, not hoary beneath, and the flowers are smaller as well as much paler. If it were probable that such a thing would happen, this might be suspected to be a cross between C. azureus and americanus.

It is a beautiful shrub, and much hardier than Ceanothus azureus; during the summer and autumn months it flowers freely, if trained to a wall with a south aspect.

It strikes readily from cuttings of the half-ripened wood during autumn, and grows well in any soil, if not too poor or too wet.

The accompanying figure was taken from a plant in the garden of the Horticultural Society, which was presented by the Messrs. Baumanns of Bollviller, under the name of *Ceanothus ovatus*.



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IPOMÆĂ longĭfŏlĭă.

Long-leaved Ipomæa.

PENTANDRIA *MONOGYNIA.*

Nat. ord. CONVOLVULACEÆ.
IPOMÆA. Botanical Register, vol. 1. *fol.* 9.

I. *longifolia;* caule prostrato angulato glabro, foliis breviter petiolatis oblongo-lanceolatis obtusis mucronulatis crassiusculis glabris, pedicellis unifloris folio subæquilongis supra medium articulatis minutè bibracteolatis, sepalis ellipticis obtusis glabris. *Bentham plant. Hartweg. p.* 16. *no.* 97.

A truly beautiful plant, introduced by the Horticultural Society from Mexico, where Mr. Hartweg found it in the pastures about Leon, called *Quebra platos.* It has been extremely well characterized by Mr. Bentham in his very useful *Plantæ Hartwegianæ.*

The large and semitransparent flowers diffuse a delicious perfume, resembling noyeau.

It is a half-hardy perennial, with a long spindle-shaped root and a stem from four to five feet long, without any side branches; unless supported by some other plants or tied up to a stick it would probably become nearly prostrate.

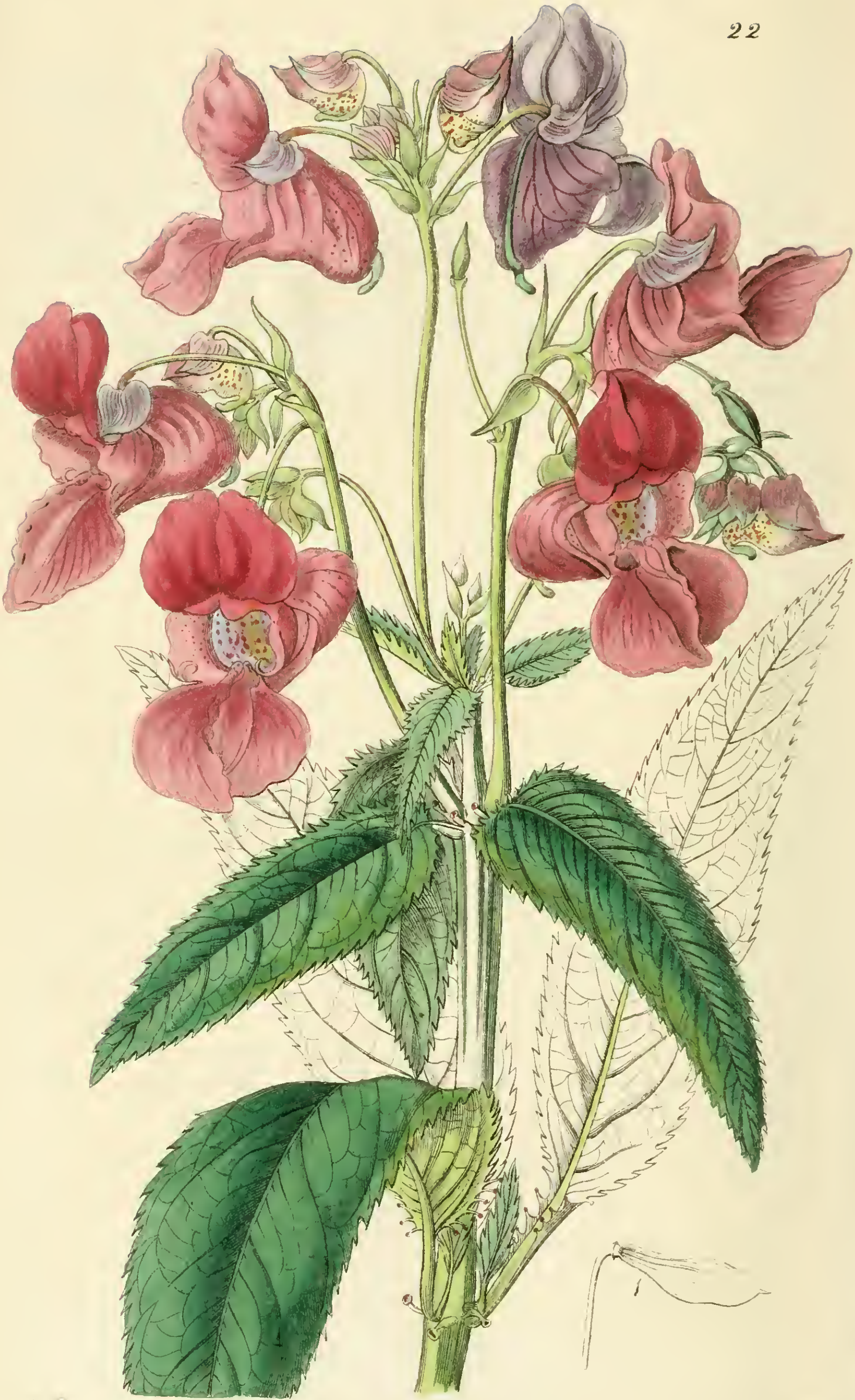
The time of flowering is from July to September; each flower opening in the morning and lasting all day, if not exposed to the mid-day sun, and each stem producing a fresh flower nearly every day. Being very fragrant it is well worth placing in the sitting-room during the blooming season, especially as the plant, when in flower, seems to require shade.

It appears difficult to increase except by seeds, which probably will be produced freely when the plants become older; but it may be multiplied by the young shoots, which spring from the crown of the root, when about two or three inches long; and as each root produces three or four shoots or more, according to its size, one or two such shoots may be taken from each plant for the purpose of propagation.

Like most of the order it likes a strong rich but not damp soil during the growing season; when it has ceased growing it may be taken up and treated like similar roots during winter, care being always taken to keep them dry, free from frost, and as much excluded from the air as possible.

The plants in the garden of the Society were raised from seeds collected by Mr. Hartweg in 1838, of which a large quantity was distributed, with a label marked *Convolvulacea, splendid, half-hardy*; a designation which the plant truly merits.

22



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IMPĂTĬĒNS glandulĭgĕrā.

Glandular Balsam.

PENTANDRIA *MONOGYNIA.*

Nat. ord. BALSAMINEÆ (GERANIACEARUM mera sectio).
IMPATIENS. *Linnæus.*

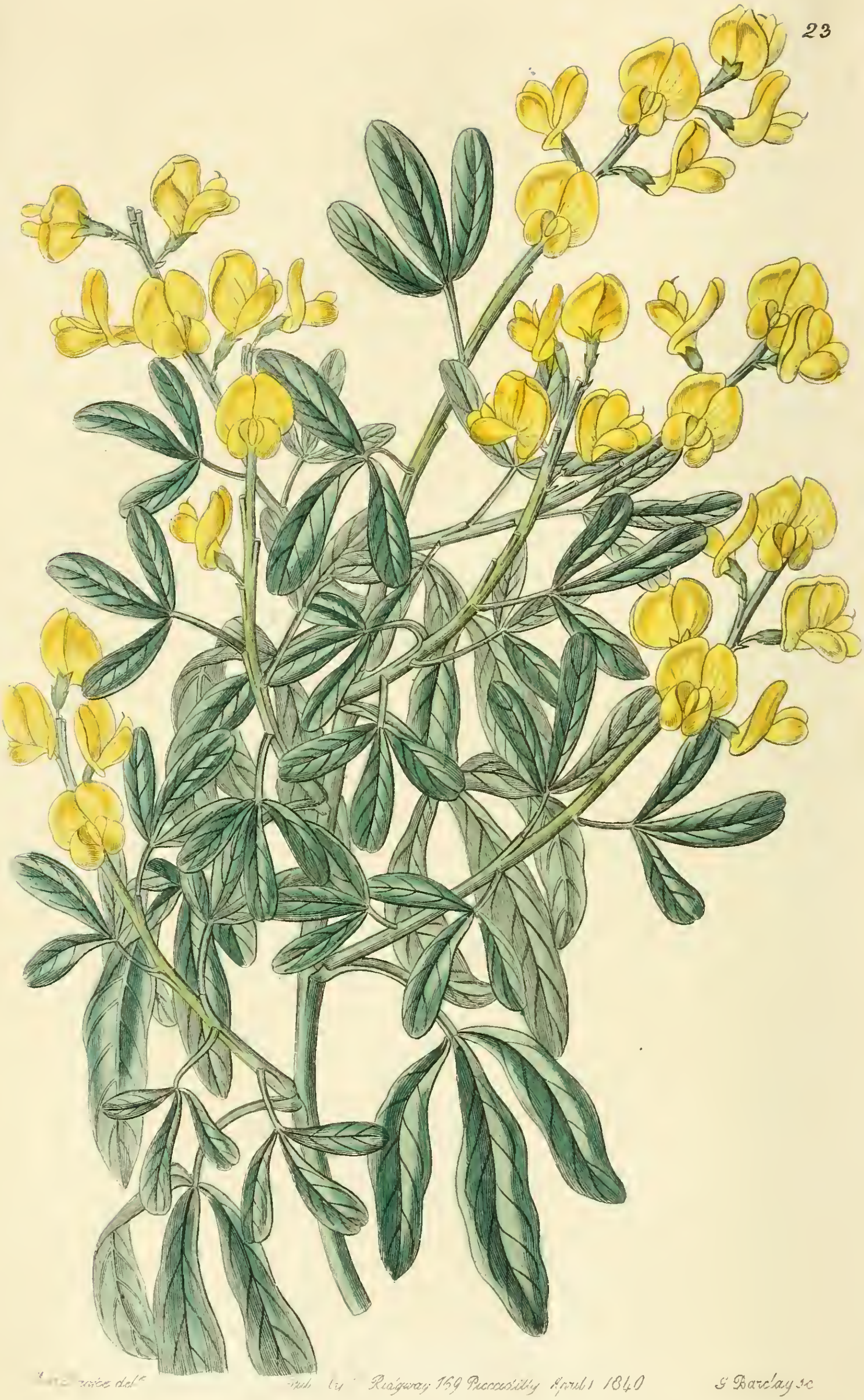
I. *glanduligera;* annua, erecta, foliis verticillatis ternatis ovato-lanceolatis argutè serratis serraturis baseos glandulosis, stipulis teretibus clavatis glandulosis, pedunculis axillaribus subterminalibus 3-floris, sepalo dorsali integro mutico, calcare brevi inflexo, petalorum lobo altero rotundato altero dimidiato oblongo obtuso subfalcato, fructu brevi obovato.

I. glanduligera. *Royle Illustrations, &c. of the Himalaya Mountains,* 151. *t.* 28. *f.* 2.

This fine Balsam is the largest of the four Indian species raised in the garden of the Horticultural Society last year, it having attained upwards of twelve feet in height by the end of August, although the seeds were not sown before the end of May. It is not so hardy as those with the long fruit, but flowers freely all the autumn, and is one of the most beautiful plants that can be looked upon if grown in an atmosphere it likes. What that atmosphere is has already been shewn at folio 9 of the present volume, to which I proceed to add the following from the work of Dr. Royle, who obtained this species from Cashmere seed.

"There is a peculiarity in the hill climate of India, where the moderation and equability of temperature, excess of moisture, and consequent smallness of evaporation during the rainy season, has been shewn to be favourable to the existence of tropical plants. At this season the Balsams may be seen, apparently unchanged for weeks together, with other plants that delight in a moist temperature, as Orchideæ, Scitamineæ, a few Melastomaceæ, Cyrtandraceæ, Begonias, the beautiful Platystemna violoides, and others of which the genera are considered peculiar to a tropical climate; and of so loose, moist, and cellular a texture as would at any season in this locality be destroyed in a single day."

23



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GENĪSTĂ bracteolātă.

Racemose Genista.

DIADELPHIA (MONADELPHIA) *DECANDRIA.*

Nat. ord. Fabaceæ, § Papilionaceæ.

GENISTA. Botanical Register, vol. 14. *fol.* 1150.

G. *bracteolata;* incano-pubescens, foliis ternatis, foliolis obovatis obtusissimis basi angustatis, racemis terminalibus elongatis floribus dissitis.

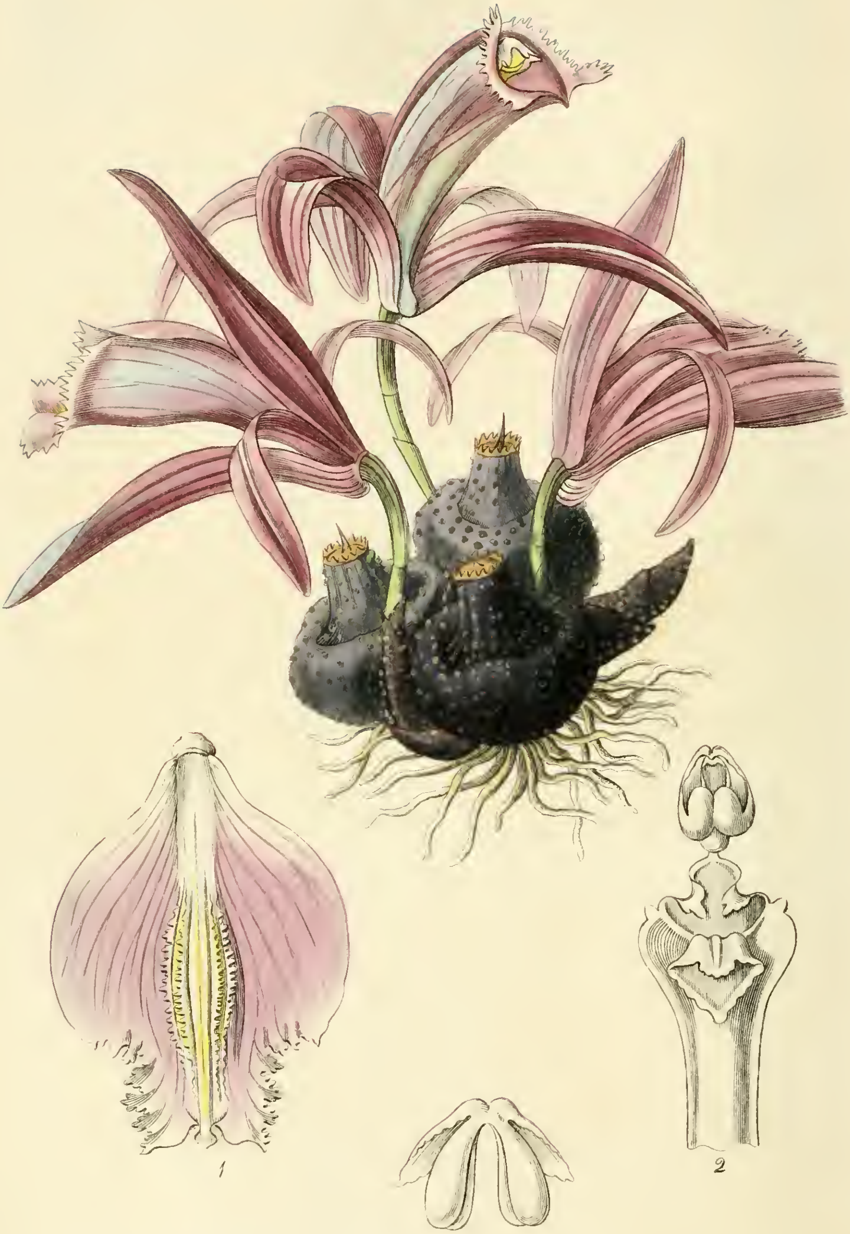
Genista bracteolata. *Link enum. plant. hort. reg. berol.* 2. 224. *DeCand. prodr.* 2. 146.

The accompanying drawing of this rare plant was made in June, 1832, from a specimen communicated by Mr. Young, nurseryman, of Milford, which was unfortunately lost. It had been received by him from Mr. Webb, who had gathered it in Teneriffe, and sent it home under the name of *Cytisus racemosus.* Some years afterwards, upon shewing the figure to Mr. Webb, he recognized it as the *Genista bracteolata* of Link, an obscure plant unknown to DeCandolle.

It approaches very near to some of the plants known in herbaria under the name of *G. candicans*, especially to that gathered by Mr. Boissier on the mountains of Ronda, and Link stations it next to that species; its long narrow leaflets and loose terminal racemes seem however to keep it distinct.

The cultivation of the species should doubtless be the same as that of similar leguminous plants from the Canaries, such as *Genista canariensis*, now commonly called *Genista rhodopnœa* (the rose-scented) in the gardens.

They multiply readily from cuttings, and may be grown either in a pot in the greenhouse or planted out in the border of the conservatory. They form handsome bushes in either place, and become one mass of sweet-scented bloom for many weeks in the early part of the season. The soil which they prefer is equal parts of loam and peat, well mixed with sand. Many of the species will grow luxuriantly upon a south wall in summer, but if not well protected will suffer from the frost in winter.



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*CŒLŎGȲNĒ Wallichiānă.

Wallich's Cœlogyne.

GYNANDRIA *MONANDRIA.*

Nat. Ord. ORCHIDACEÆ, § MALAXIDEÆ.

CŒLOGYNE. Botanical Register, vol. 11. *fol.* 868.

C. *Wallichiana;* pseudobulbis ampullaceis vaginisque duris tuberculatis, pedunculis radicalibus unifloris basi vaginatis, labelli trilobi basi saccati lobis lateralibus integerrimis cum intermedio denticulato crispo apice truncato integerrimo plicato apiculato confluentibus, disci cristis 4-5 incompletis denticulatis, columnâ apice dentatâ.

C. Wallichiana. *Gen. & Sp. Orch. p.* 43. *Wall. Plant. As. rar.* 1. 46. *t.* 54. *Bot. Reg.* 1838. *misc. no.* 157.

This beautiful little plant, is, according to Dr. Wallich, a native of the lofty range of mountains which confine Bengal towards the district of Sylhet, in an easterly and northerly direction, inhabiting rocks and the trunks of trees among moss. It is not mentioned by Dr. Royle, but that distinguished traveller found a nearly allied species, C. præcox, ornamenting with its large richly coloured flowers the branches of oaks on Lundour, at 7,500 feet of elevation, in 30° N. lat.; but only during the moisture of the rainy season. *(Illustrations of the Botany of the Himalayas,* p. 364.)

The figure now given was taken from specimens communicated by order of His Grace the Duke of Devonshire, from Chatsworth, to which place it had been brought by Mr. John Gibson, as has been already stated in the miscellaneous matter of this work for 1838, No. 157. Other flowers have been sent me by Mr. Bateman, with the following note.

" This beautiful plant I owe to the liberality of the Duke of Devonshire. It is now (Oct. 1838) flowering with me in great perfection, and in the brilliancy and magnitude of its blossoms far surpasses the figure of it in Wallich's Plantæ Asiaticæ rariores ; in other respects the representation there given is singularly characteristic. The pseudo-bulb has much the form and hue of a truffle, and loses its leaf before the appearance of the flowers; which come up, one on either side. They are almost as large as those of Cattleya labiata, and are of a uniformly rich transparent rose-colour, except in the interior of the lip which is decorated with a broad streak of yellow on its disk, and traversed by five parallel ridges of white tubercles. There are also a few deep crimson stains scattered on its surface. The plant appears to be of the easiest cultivation, and its flowers very durable."

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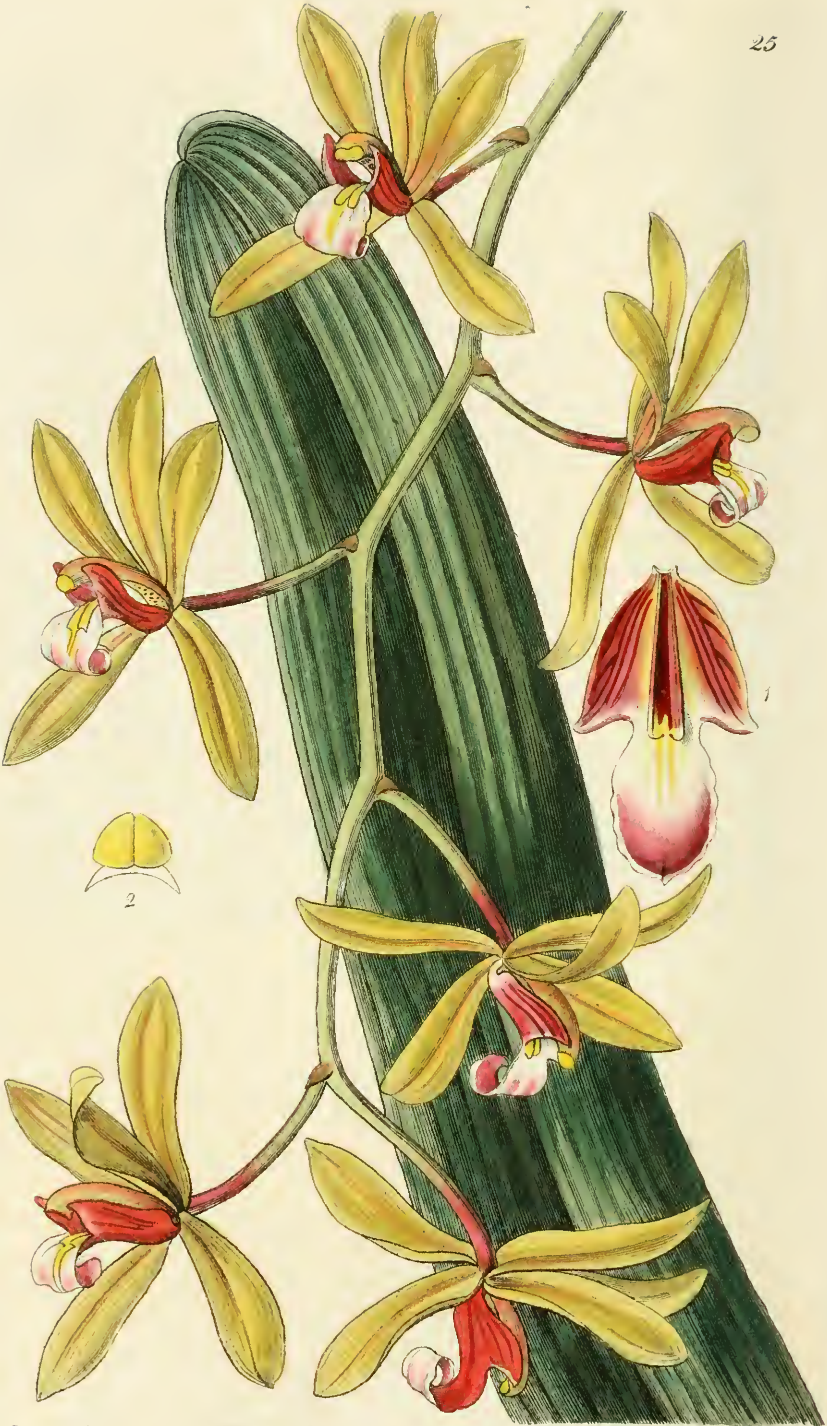
* So named from κοιλος hollow, and γυνη, used in the sense of stigma; in allusion to the form of that organ.

The examination of fresh specimens of this and other species of Cœlogyne has satisfied me that the genus belongs to *Epidendreæ* rather than to *Malaxideæ,* and that it should be stationed near Phaius ; for the pollen-masses do not lie loose and free in the inside of the anther, on the contrary they adhere to two thin plates of pulverulent matter, bent back upon themselves, as is represented at fig. 3. of the accompanying plate; where fig. 1. is a view of the interior of the labellum, and fig. 2. of the column with the projecting hollow stigma, and the anther lifted up, and turned back. In the Indian figure published by Dr. Wallich the lower lip of the stigma is represented 3-toothed, and this supposed peculiarity forms part of the specific character originally framed for the species ; I now find, however, that no such structure exists.

25



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CYMBĪDĬŪM pēndŭlūm.

Thick-leaved Cymbidium.

GYNANDRIA *MONANDRIA.*

Nat. Ord. ORCHIDACEÆ.

CYMBIDIUM. Botanical Register, vol. 7. fol. 529.

C. *pendulum;* foliis ensiformibus distichis coriaceis obliquè obtusis, racemis pendulis multifloris, bracteis minutis, petalis sepalisque lineari-oblongis obtusis, labelli trilobi lobis lateralibus acutis intermedio oblongo apiculato: lamellis continuis approximatis apice confluentibus.
Epidendrum pendulum. *Roxb. corom. plants.* 1. 35. *t.* 44.
C. pendulum. *Swartz. nov. act. ups.* 6. 73. *Willd. Sp. Pl.* 4. 101. *no.* 30. *Roxb. fl. ind.* 3. 458. *Lindl. gen. et sp. orch. p.* 165.
C. crassifolium. *Wall. cat. no.* 7357.

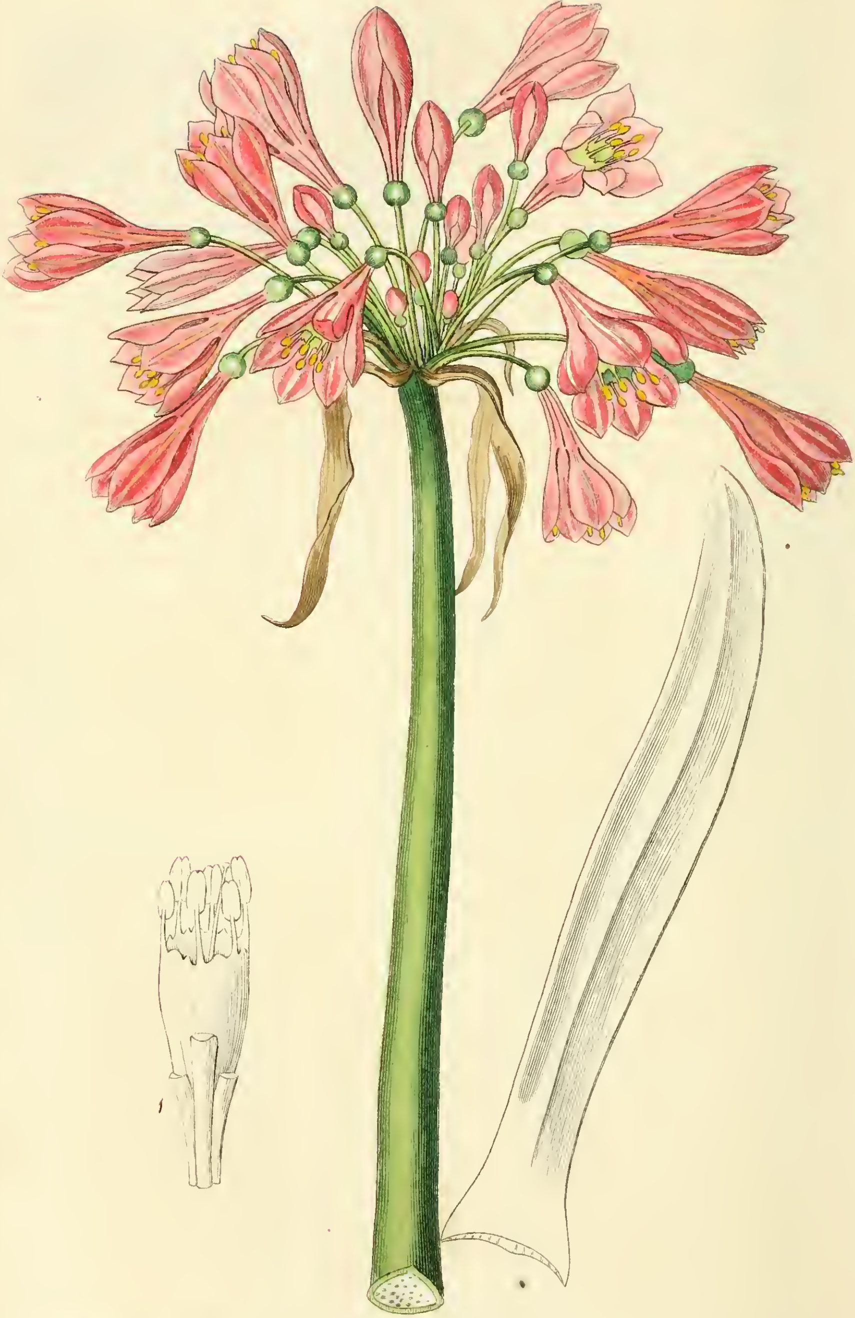
Originally observed by Dr. Roxburgh on trees in the province of Sylhet, and in the forests which cover the Circar mountains as well as those of Bengal; afterwards met with at Noakote in Nepal by Dr. Wallich.

The latter Botanist considered his plant different from that of Roxburgh, and it has smaller flowers; but I do not perceive in what the distinction otherwise consists. The specimen now figured was sent by Dr. Wallich to the Hon. and Rev. W. Herbert, who forwarded a fine specimen, nearly three feet long, with a dozen flowers upon it, to the Horticultural Society in August, 1838.

It is very distinct from all others. Its leaves are from two to three feet long, stiff, leathery, obliquely obtuse, and strongly furrowed; at the base they form a distichous tuft, like that produced by the equitant leaves of an Iris. The flowers exceed in size those of any of the species nearly allied to this. They are however of a dirty yellowish brown colour, which diminishes their beauty, notwithstanding the clear red and white of the labellum. As they hang downwards, the plant should be suspended from the roof of the stove like

Cymbidium aloifolium, to which it is most nearly allied; but, independently of the large size of the flowers, this is readily known by the lamellæ of the lip being continuous, straight, and touching at the point, instead of being broken in two and curved. I fear however that some at least of the specimens distributed by Dr. Wallich upon my authority under the number 7352, and the name of C. aloifolium, are this C. pendulum.

26



[illegible] by J Ridgway 169 Piccadilly May 1 1840 G Barclay sc.

CALOSTĒMMĂ carnĕūm.

Flesh-coloured Calostemma.

HEXANDRIA *MONOGYNIA.*

Nat. ord. AMARYLLIDACEÆ.
CALOSTEMMA. Botanical Register, vol. 5. *fol.* 421.

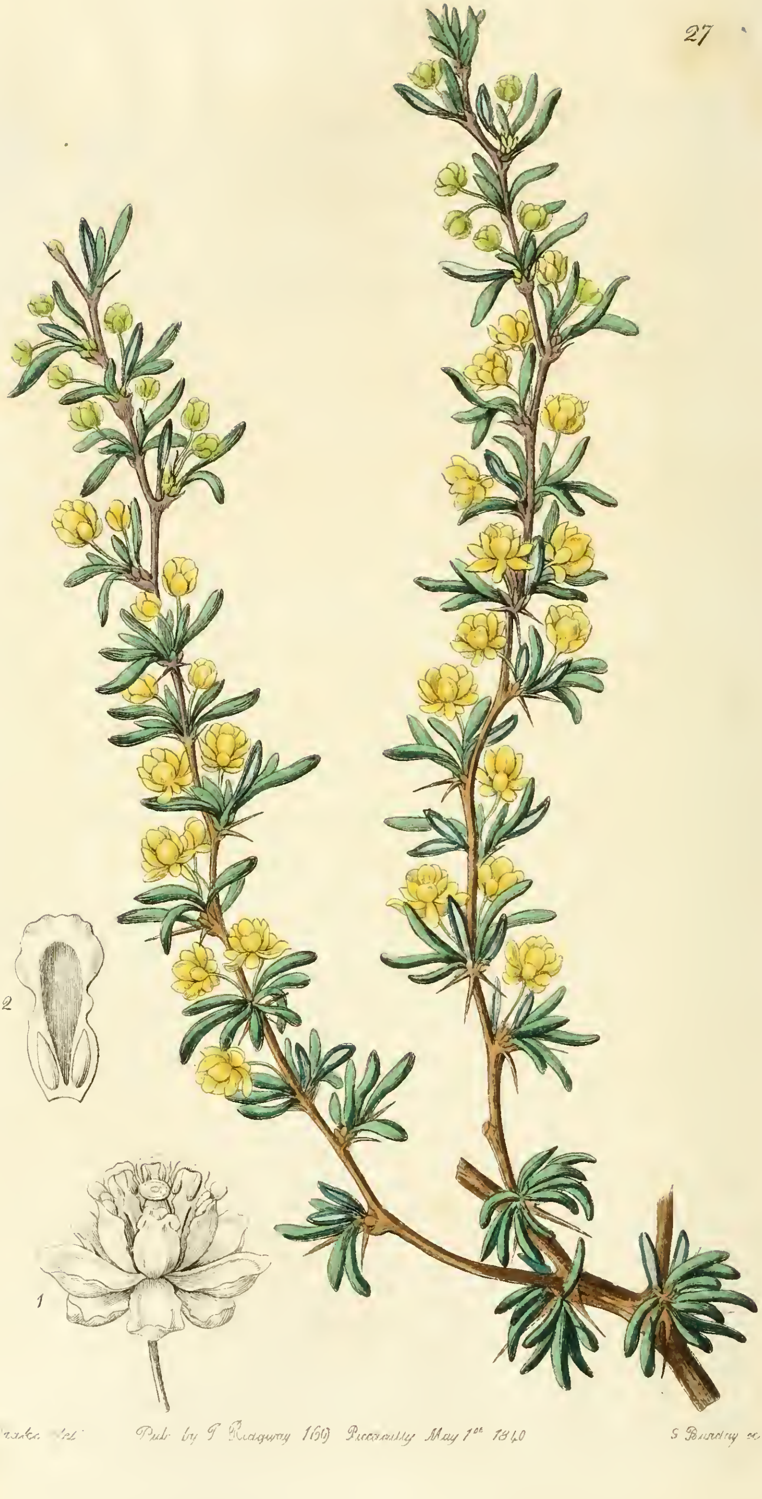
C. *carneum;* foliis contemporaneis rigidis ensiformibus scapo brevioribus, tubo perianthii limbo subæquali, coronâ truncatâ inter stamina edentatâ emarginatâ, umbellis densis, pedicellis articulatis exterioribus multò longioribus.
C. carneum. *Lindley in Mitchell's Eastern Australia, vol.* 2. *p.* 39.

This pretty bulb is a native of Australia, where it was found in April, 1836, by Major Sir Thomas Mitchell, on the summit of Goulburn range, a chain of rocky mountains composed of "hornstone and granular felspar, light coloured, partially decomposed, and lying in rounded nodules and boulders." Having been presented to the Horticultural Society by its indefatigable discoverer, it flowered in a pit in the Chiswick garden in September last.

It is evidently very near C. purpureum, figured at fol. 422 of this work, 1st series, a plant now lost to our gardens, and which I have never seen, and at first I thought it a mere variety with paler flowers; but the definition given by Brown, *coronæ dentibus sterilibus triangularibus,* will not at all apply to this plant; and Mr. Ker in his detailed description confirms Brown's character by a precise account of the coronet, stating it to have between the stamens very narrow purple membranes, which are bidentate, or occasionally split, so as to give the filaments the appearance of being toothed on each side, as in certain species of Allium and Ornithogalum. Here on the contrary there are no processes between the stamens, but the space found at that place is green, and either a little rounded, or merely emarginate, as is shewn in the accompanying fig. 1. Moreover the articulation in the pedicels, which is very conspicuous in this species, is not adverted to by either Brown or Ker, neither of whom would have been likely to have overlooked it had it existed in their plant; the more especially as it is not visible in Calostemma luteum.

An account of the mode of treatment suitable for this plant will be found a few pages back, at fol. 19.

27



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BĒRBĔRĬS empetrifŏlĭă.

Crowberry-leaved Berberry.

HEXANDRIA *MONOGYNIA.*

Nat. ord. Berberaceæ.
BERBERIS. Botanical Register, vol. 6. *fol.* 487.

B. *empetrifolia;* spinis hastato-tripartitis simplicibusque margine revolutis, foliis fasciculatis mucronatis linearibus margine ciliatis revolutis, floribus solitariis geminisque.

B. empetrifolia. *Lam. illustr. t.* 253. *f.* 4. *DeCand. syst. nat.* 2. 16. *Loudon's arbor. Britann. pp.* 306. *&* 2537. *Sweet Brit. Fl. Gard. ser.* 2. *t.* 350.

If the identifications of writers on this pretty little bush are correct, it must have an extensive range along the southern parts of South America; for Commerson is said to have found it common in subalpine woods at the straits of Magellan; Captain King is stated to have met with it at the same place, and to have sent its seeds through his collector Anderson to Mr. Lowe of the Clapton nursery, where it was raised, and furnished all the stock now to be found in this country, while the only wild specimens I have seen were collected in Chile by Dombey, and in the Andes of that country by Messrs. Macrae and Cuming.

It is a very remarkable and pretty plant, but evidently dislikes the climate of the country round London, where it is a rather delicate slender trailer; my Chilian specimens shew it however to be under more favourable circumstances a rigid, robust, erect bush, which must be extremely beautiful. It would be worth trying the effect of a conservatory, or of a Devonshire or Cornish climate upon its constitution.

The specimen now figured was obtained in the garden of the Horticultural Society, where it flowers in the month of May.

Fig. 1. represents a flower, magnified, just before the anthers expand their valves ; 2. is an interior view of one of the hollow petals, with the glands on each side.

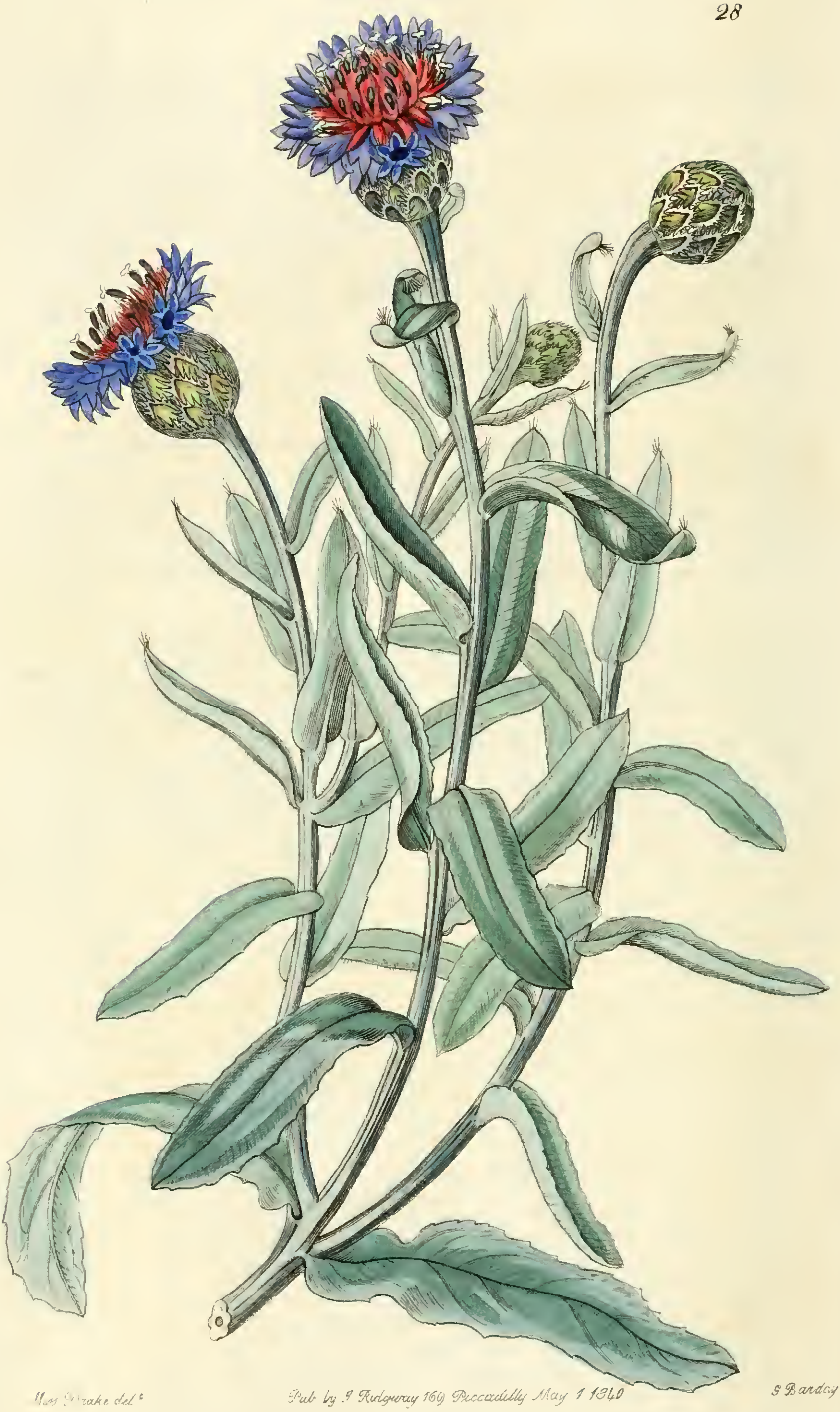
When cultivated in the open border it forms a neat little shrub, from one to two feet high, with slender decumbent branches, and it flowers freely about the middle of May, particularly if planted in the American border or on rock-work ; but it must have some protection from the parching heat of the sun during summer.

It is easily increased by layering, or by seeds, if the following is attended to :

Firstly, the plant should be layered about August, always choosing a moist or dull day when the operation is to be performed, and using a little white sand for making that part of the soil round the layer light ; the layers will be two years before they are well rooted, and fit to remove from the mother plant.

Secondly, the seeds should be sown as soon as the berries are ripe, which is about August, in pans or pots filled with a good loamy soil, and placed in any cold pit or frame during winter ; they will require no more care or trouble, as they will not vegetate before the spring ; but should the seeds not be sown before the spring, which is a common practice, they will not vegetate for a twelvemonth, and then very weakly if at all.

28



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CENTAUREĀ pūlcră.

Beautiful Blue Bottle.

SYNGENESIA *POLYGAMIA.*

Nat. ord. CYNARACEÆ, *seu* COMPOSITÆ-CYNAREÆ, DC.
CENTAUREA. *L.*

Ser. III. CYANEÆ. Squamarum involucri mediarum appendix plùs minùs scariosa secus squamam decurrens, rariùs in spinam simplicem desinens. Sect. XV. CYANUS. Involucri ovati aut subglobosi squamæ margine usque ad apicem serrato-membranaceo ciliato cinctæ. Cor. radii discum superantes. Stigmata libera. Pappus duplex, mediocris aut brevis.—— Capitula non bracteata. *DC. prodr.* vii. 578.

C. *pulcra;* caule ramoso foliisque uniformiter albido-tomentosis, foliis latolinearibus subsessilibus amplexicaulibusque basi rotundatis apice acutis integerrimis aut hinc inde denticulatis, fructus pappo duplici: ext. paleis linearibus vix acutis regulariter imbricatis et successive longioribus achænii longitudinem æquantibus, interiore pauciseto. *DC. prodr. l. c. no.* 66. *paucis mutatis.*

The garden of the Horticultural Society owes this pretty annual to Dr. Hugh Falconer, superintendent of the Botanical Garden, Saharunpur; but whether or not it is a native of the North of India is not clear. According to DeCandolle it was found by Wight and Royle cultivated in gardens; but the latter author adds, in his "Illustrations of the Botany of the Himalayan Mountains," that he had received it only from Cashmere, whence he supposes it to have been introduced into the gardens of the Indian peninsula.

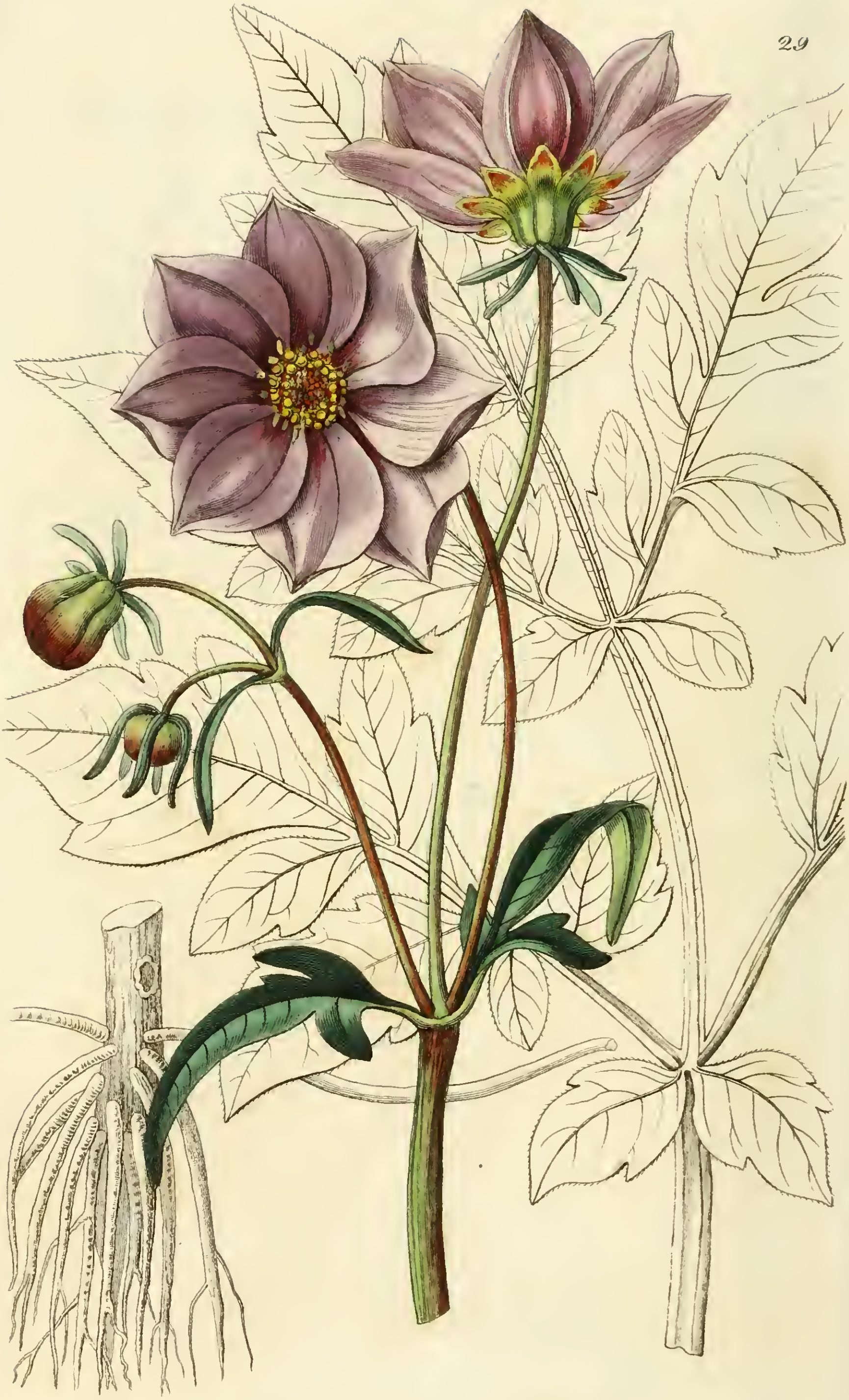
With us it is a beautiful hardy annual, in general appearance resembling the queen of our wild flowers, the Centaurea cyanus of corn-fields; but it is much more woolly, dwarfer, a good deal branched, with shorter radial florets, and the pappus of its fruit is long, discoloured, very unequal, and at least as long as the seed-vessel itself. In its manner of growth it bears more resemblance to C. depressa, of the Crimea and western provinces of Persia, but its fruit again distinguishes it clearly, as DeCandolle has correctly stated.

In the accompanying figure the more beautiful features of this species are hardly visible, nor indeed in plates executed cheaply like those of the present work could they be represented. They consist in the very clear bright blue of the radial florets, contrasted with the crimson of the centre, and in the silvery glittering appearance of the lacerated scales of the involucre, which are a delicate green in the centre, with a brown border and a delicate dry membranous pectinated fringe.

It is a hardy annual, growing about a foot high in any good garden soil, and requiring the same treatment as the old Centaurea americana.

It flowers nearly all the summer and autumn.

29



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* DĀHLĬĂ glabrātă.

Smooth Dwarf Dahlia.

SYNGENESIA *POLYGAMIA.*

Nat. ord. Asteraceæ, or Compositæ, § *Asteroideæ Ecliptеæ*, DC.
DAHLIA. Botanical Register, vol. 1. *fol.* 55.

D. *glabrata ;* caule viridi glaberrimo fistuloso, foliis bipinnatis glabris superioribus linearibus indivisis, rachi alatâ ; foliolis ovatis acutis grossè serratis ciliatis, ligulis fœmineis, involucri foliolis extimis linearibus patentibus.

Herba *perennis,* radicis *fasciculatæ digitis tenuibus inter se parum inæqualibus.* Caulis *glaberrimus, ramosus,* 3-*pedalis, fistulosus.* Folia *glabra, nitida ;* inferiora *bipinnata rachi alatâ ;* foliolis *ovatis, grossè et paucè serratis, ciliatis, nunc basi rotundatis, nunc decurrentibus et confluentibus* ; *pari unico ad utramque petioli furcam ;* superiora *multò minora, demùm linearia simplicissìma.* Capitula *iis* D. variabilis *similia, bracteis exterioribus patentibus linearibus.* Ligulæ *pallidè purpureæ fœmineæ.* Ovaria *setâ unâ alterâve minutissimâ pappi loco.*

A native of Mexico, whence its seeds were obtained by George Frederick Dickson, Esq. who presented them to the Horticultural Society ; they were marked *Dahliæ sp.—subfrigid districts—with lilac flowers.*

It is evidently different from *D. scapigera,* a new species from the same country, in its bipinnate leaves and branching habit; and also from *D. Barkeriæ,* another of very recent introduction, in its smoothness and its fistular stem ; nor does it appear probable that it should be a mere variety of *D. variabilis,* whose endless offspring have filled the gardens with gay autumnal flowers. At least it appears to differ from that variable species, not only in its naturally dwarf habit and perfect smoothness, but also in its roots, which have fangs slender and uniform in size, instead of being partly large and succulent and partly resembling fibres.

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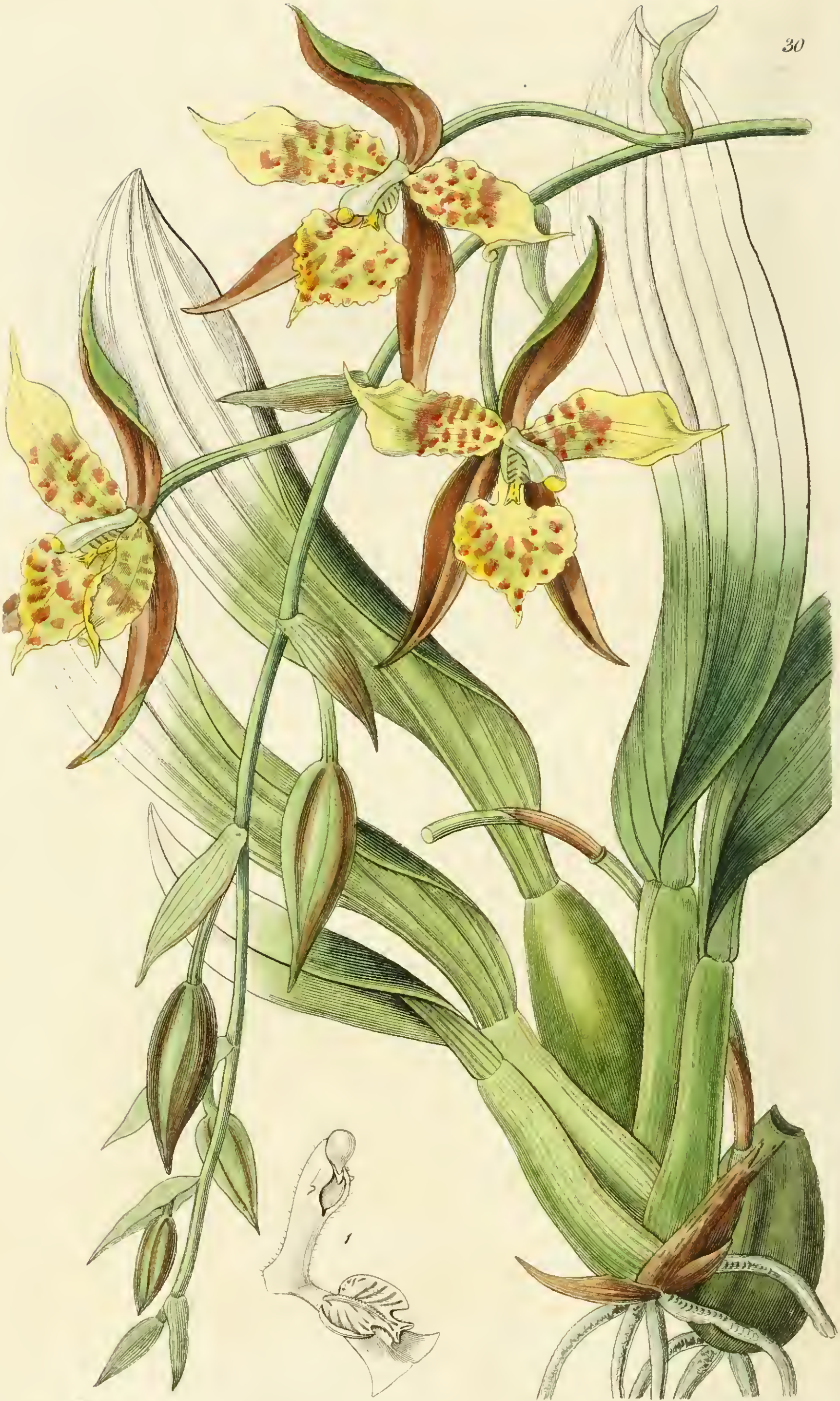
* As this word was formed after the name of Andreas Dahl, a Swede, and pupil of Linnæus, it should be pronounced with *a* broad, as in p*a*rk, and not like the *a* in p*a*le. There is also a Dalea, named after John Dale, an Englishman, to which the latter sound belongs.

There can be little doubt that this and D. scapigera will give birth to quite a new race of garden Dahlias, in which dwarfness, so much to be desired, will not be an accidental deviation from a natural tendency to acquire a lofty stature, but will be a fixed habit, which may possibly and indeed probably increase till varieties shall have been secured whose height when in full flower will not exceed a foot.

In its present state this pretty plant grows about three feet high, and requires the same management as the common Dahlia. It flowers from the end of July until destroyed by the frost in autumn.

It answers remarkably well if treated as a half-hardy annual, which is by far the easiest and best way to grow it, as by saving the seed every season there is no necessity for preserving the old roots, which are like those of the common Dahlia, but much slenderer.



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ODONTOGLŌSSŪM maculātūm.

Yellow and Brown Odontoglossum.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDACEÆ, § VANDEÆ.
ODONTOGLOSSUM. Botanical Register for 1839, *t.* 48.

O. *maculatum;* pseudobulbis oblongis compressis monophyllis, foliis oblongis nervosis acutiusculis racemis pendulis multifloris brevioribus, bracteis navicularibus herbaceis ovario brevioribus, sepalis lineari-lanceolatis acuminatis discoloribus, petalis oblongis undulatis acuminatis, labello cordato acuminato subcrenato: appendice unguis bivalvi concavâ cochleari apice productâ emarginatâ per medium argutè serrulatâ, columnâ pubescente.

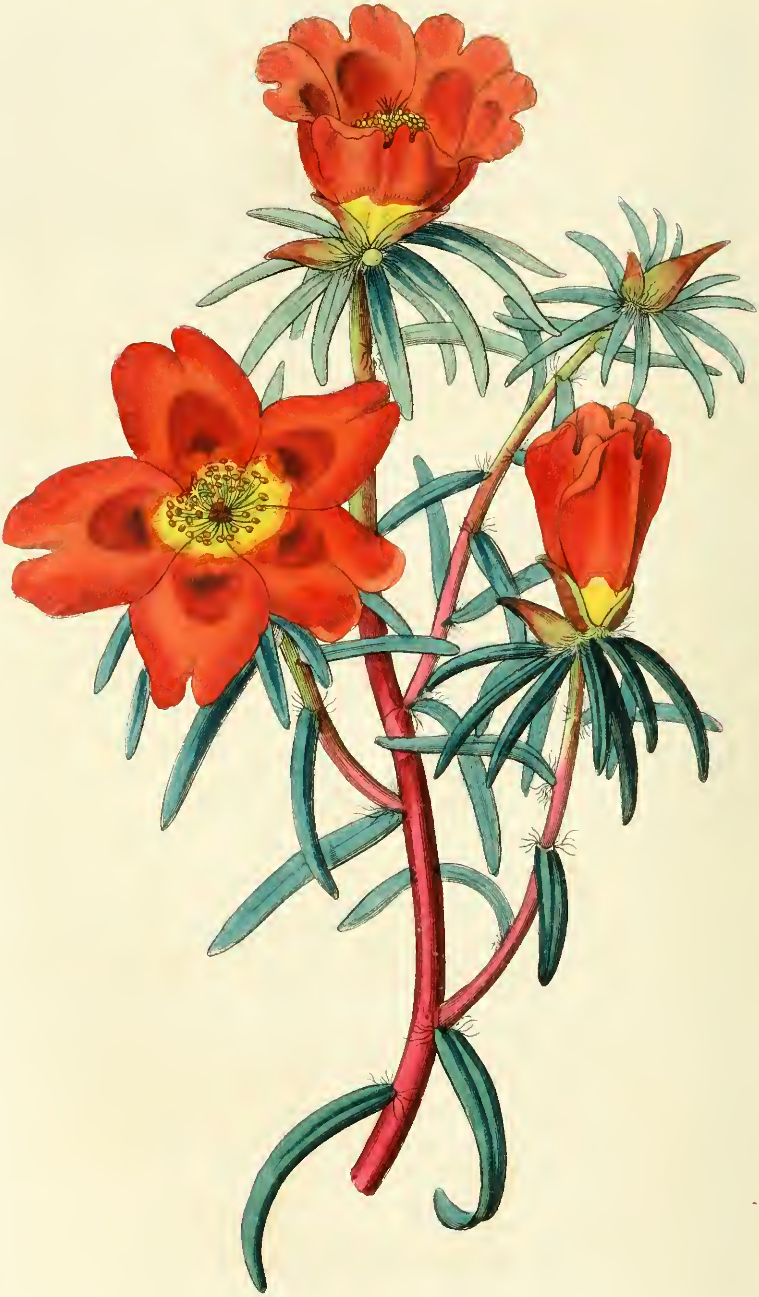
Folia *præter illud pseudobulbo innatum plura, cum petiolo equitante articulata,* 5-7-*nervia, pergamenea, lætè viridia.* Sepala *extus viridia, intus fusca,* petalis *teneris luteis versus basin sanguineo-nebulosis crassiora.* Labellum *ejusdem coloris texturæque ac petala;* appendice *bivalvi, subpubescente, intùs purpureo-venosâ.* Columna *versus apicem utrinque obsoletè auriculata.*

Another rarity from the rich storehouse of Mr. Barker, who imported it from Mexico. It is one of the prettiest of the family, because of its large two-coloured spotted flowers and drooping habit, and seems to have much the manner of growth and constitution of an Oncidium.

When it was first sent to town I mistook it for the *Odontoglossum Cervantesii* of La Llave, for it bears a great resemblance to that plant as described by its author; but upon a more attentive consideration I see it must be different, for the latter is said to have snow-white flowers, and this is not a circumstance in which plants of Orchidaceæ are likely to vary. It is no doubt the *O. maculatum* of this author.

It was also found in the west of Mexico by Count Karwinski, as appears from a wild specimen for which I am indebted to Mr. Bateman.

Odontoglossum cordatum, now figured in the Floral Cabinet, t. 100, approaches this very nearly; but, independently of the difference in the colour and size of its flowers, it has exceedingly acuminate sepals and petals, and quite another kind of appendage to the stalk of the labellum. Before I had seen the plant now figured I was disposed to believe that species to be the *O. maculatum* of La Llave, as is stated in the Sertum Orchidaceum, so very difficult is it to judge correctly of the insufficient descriptions of the Mexican Botanist. I now find that they are truly distinct.



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PORTULĀCĂ Thellusōnĭi.

Mr. Thelluson's Purslane.

ICOSANDRIA *MONOGYNIA.*

Nat. ord. PORTULACACEÆ.
PORTULACA. *Botanical Register, vol.* x. *fol.* 792.

P. *Thellusonii;* annua, caule erecto, axillis filamentosis, foliis alternis subcylindricis acuminatis obtusis floralibus subverticillatis, floribus ad apices ramorum congestis sessilibus, petalis bilobis concavis sepalis subæqualibus pluriès longioribus.
P. grandiflora rutila. *Bot. Reg.* 1839. *misc. no.* 114.

Let not the reader imagine the accompanying figure to be an exaggeration, either as to the size of the flowers or their colour, for he may be assured on the contrary that art is unable to do justice to the brilliant appearance of this most beautiful annual, which grows about a foot high, and flowers nearly all the summer, if sown in pots filled with a mixture of old lime-rubbish and well rotted dung or decayed leaf-mould, and fully exposed to the sun. It should be kept in a sheltered place, for although it will grow tolerably well if planted in the open border, the flowers are so delicate that in such situations they are much damaged by wind and rain. The best place for it is in a south window, or on the south side of a greenhouse, or at the foot of a hot south wall in a sequestered nook, especially if among a few blocks of limestone rock.

It was sent from Florence to the Horticultural Society by the Hon. Frederick Thelluson, now Lord Rendlesham, and I had erroneously regarded it as a variety of Portulaca grandiflora, which varies in the colour of its flowers; suspecting indeed that it might have been a hybrid between that plant and P. Gilliesii. It however proves so permanent in its habits as to render that supposition improbable, and seems to have all the signs of a natural species. Its deeply two-lobed petals form a good mark of distinction from that species; while its longer and taper-pointed leaves, annual habit, and more spreading petals seem to separate it equally from P. Gilliesii.

The seeds require to be sown on a hot-bed, like those of the other annuals generally called tender.

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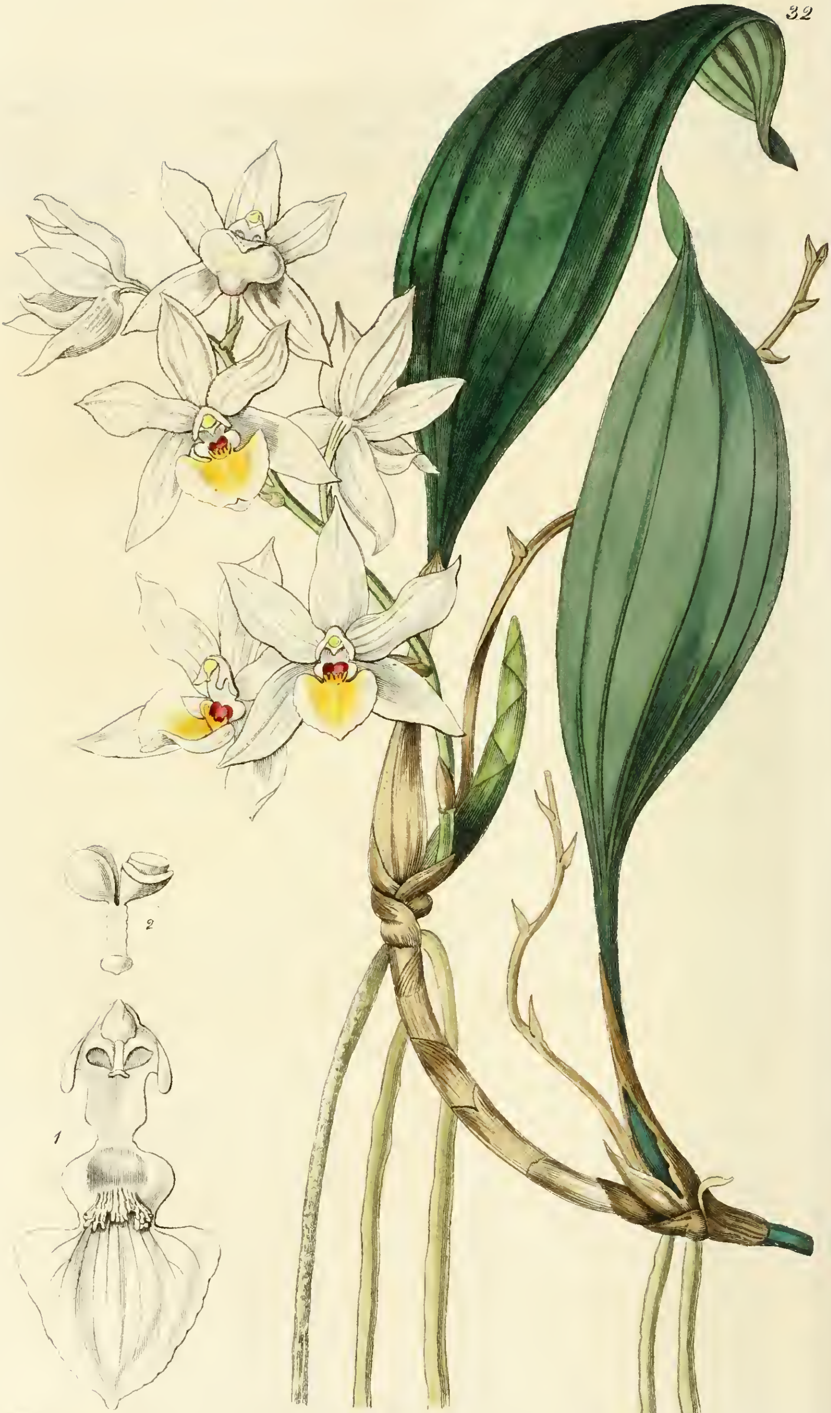

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AGANĬSĬĂ pulchĕllă.

Pretty Aganisia.

GYNANDRIA *MONANDRIA.*

Nat. Ord. ORCHIDACEÆ § VANDEÆ.

AGANISIA. *Perianthium* patens, æquale; sepalis lateralibus haud basi productis. *Labellum* liberum, mobile, indivisum, hypochilio parvo concavo, ab epichilio cristâ transversâ glandulosâ diviso. *Columna* erecta, semiteres, marginata, apice utrinque brachio acuto patulo aucta. *Anthera* ecristata. *Rostellum* elongatum. *Pollinia* 4, per paria connata, caudiculâ lineari, glandulâ parvâ ovali.—*Rhizoma* repens, pseudobulbosa. *Pseudobulbi* monophylli. *Racemus* erectus, radicalis, foliis brevior.

Aganisia pulchella. Bot. Register, 1839, misc. no. 65.

Rhizoma *repens, pennæ anserinæ crassitie, squamis vaginantibus arctè vestitum;* pseudobulbis *parvis acuminatis intra squamas latentibus.* Folia *solitaria, oblonga, membranacea, 5-costata, in petiolum angustata.* Racemi *radicales, i. e. e squamis pseudobulbos fulcientibus, erecti, 3-6-flori, foliis breviores.* Flores *candidi,* $1\frac{1}{4}$ *unciam lati;* sepalis petalisque *subæqualibus, ovato-oblongis, acutis, patulis.* Labellum *cum columnâ articulatum; hypochilio concavo sanguineo maculato, epichilio latiore, ovato, integro, medio luteo, basi cristâ lutescente glandulosâ ab hypochilio diviso.* Columna *erecta, basi ne minimè quidèm producta, semiteres, apice brachiis duobus patentibus incurvis aucta;* rostello *lineari producto.* Pollinia 4, *incumbentia* ($\substack{\circ\\\circ}$ $\substack{\circ\\\circ}$) *nec collateralia ut olim dixi; caudiculâ lineari membranaceâ, glandulâ parvâ, subrotundâ tenerâ.*

This pretty Demerara plant has hitherto flowered no where that I am aware of except with Messrs. Loddiges, who imported it. A short account of it was given in this work in the place above quoted; and the present figure, with a correction or two, completes its history.

If its column were produced into a foot, and the lower sepals unequal at the base, it would be a Maxillaria; but as there is no trace of that character, which is essential to Maxillaria, the genus seems sufficiently distinct.

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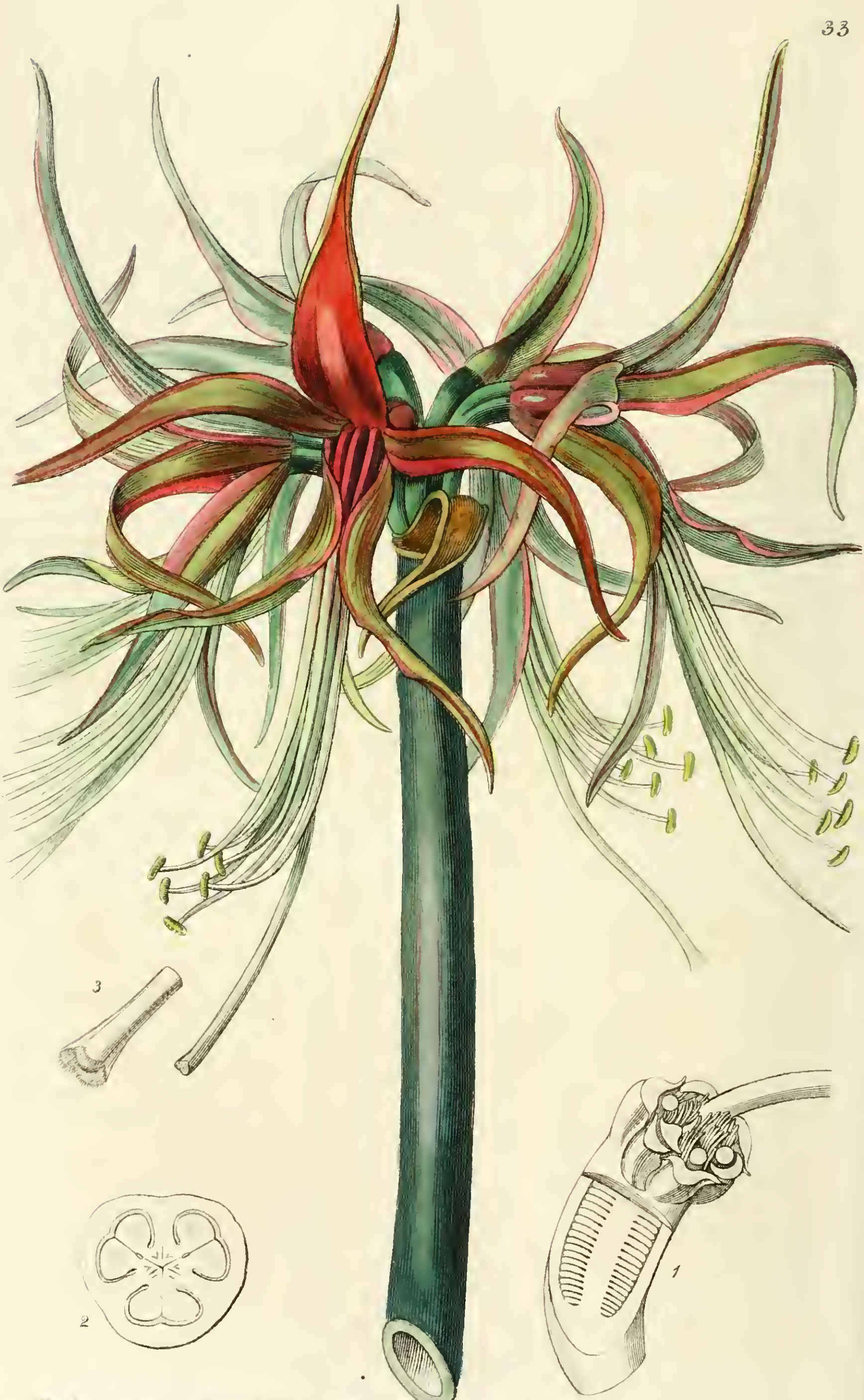
* From ἀγανὸς, quiet or desirable, in allusion to the pretty, neat appearance of the plant.

Fig. 1. represents the column, with the labellum pulled downwards to shew its true form, and the crest that separates the upper lip from the lower. Fig. 2. shews the pollen-masses in their true position, one half of the right hand pair being cut away. By some accident the pollen-masses of the first flower I examined had been pressed out of their natural position, which formerly led me to describe them as collateral instead of incumbent.

In order to cultivate this plant successfully it should be suspended upon a block of wood from the rafters of the stove, and its thick fleshy roots allowed to hang in the air and imbibe its moisture. A damp atmosphere, syringing its roots and leaves freely when in a growing state, and shade during bright sunshine, are the principal requisites in its cultivation. In other respects it may receive the same treatment as the rest of this tribe.

33



Miss Drake del. Pub. by J. Ridgway 169 Piccadilly June 1 1844 J. Barclay sc.

SPREKĔLĬĂ cybīstĕr, *v.* brevis.

The Tumbler Sprekelia, shorter-flowered variety.

HEXANDRIA *MONOGYNIA.*

Nat. ord. Amaryllidaceæ : *subord.* Amaryllideæ, Hippeastriformes.

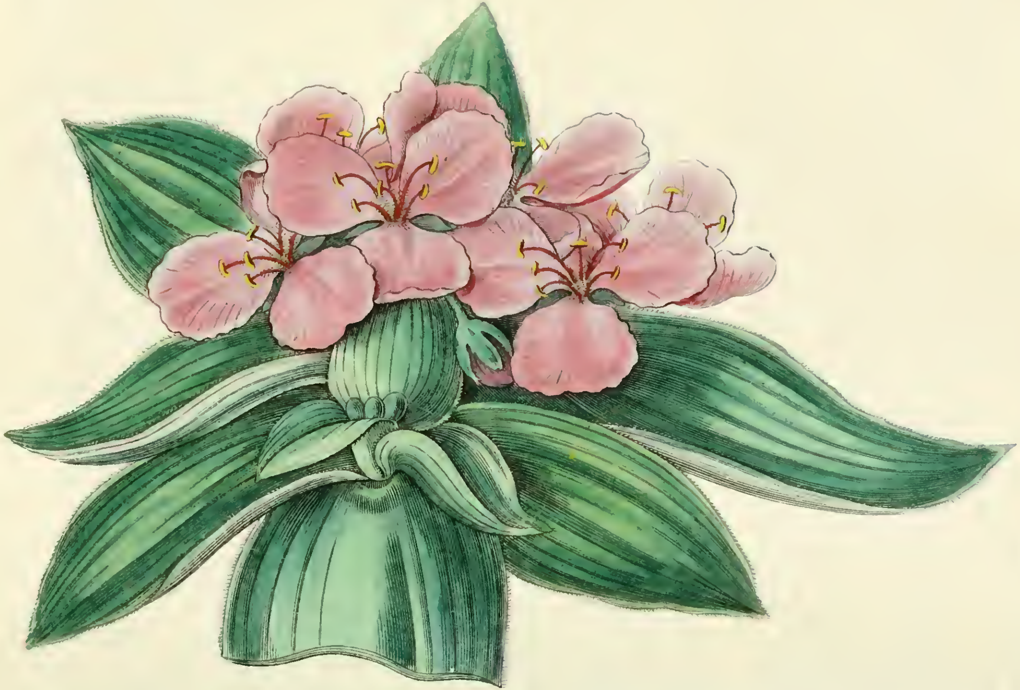
SPREKELIA. Perianthium declinatum, basi annulari inferne abbreviato vix tubato; *filamenta* fasciculata declinata labio inferiore prope basin comprehensa. *Herbert in litt.*

Sprekelia cybister; scapo circiter 4-5-floro, germine pedunculato cubante, perianthio laciniis inferne latis intus pallidè striatis superne angustatis labio inferiore precipitato apicibus reflexis, sepalis margine involuto reflexis duobus inferioribus inferne obliquè latere superiore dilatatis, petalis superioribus subplanis apice tortuosè demisso, petalo imo scapum attingente, membranâ fauciali barbatâ, stigmate parvo trilobo, filamentis cum stylo apice subassurgente precipitatis, e sepalinis superiore elongato, e petalinis inferiore abbreviato, foliis hysteranthiis linearibus circiter semunciam latis, bulbo ovato fusco. *Herbert in litt.*
v. 1. *subsexuncialis;* perianthio rubro superne subvirescente, quadriflora.
v. 2. *brevis;* flore subquadrunciali, quinqueflora. *W. H.*
Hippeastrum anomalum. *Lindl. in Hort.*

"The sketch of the plant here represented was made from a Bolivian bulb, which flowered in the nursery of Mr. Knight in the King's Road, Chelsea, and is evidently a variety of the same species as the longer-flowered plant which has lately flowered at Spofforth, and has been there named the Tumbler, from the very singular precipitation of the buds in their progress towards expansion, and the final perpendicular posture of the lower lip of the flower. The flower conforms closely with that of Sprekelia formosissima, differing from Hippeastrum in one conspicuous and decisive feature, namely, the marked separation of the lower from the upper lip, and its base closely embracing the fasciculate filaments and style. The true and original Hippeastrum aulicum differs from all others in the filaments being a little pinched by the base of the lower petal, which is a small feature of approximation towards the genus Sprekelia, but in no Hippeastrum is there any convolution of the lower sepals, of which the base in our plant is in a very singular manner obliquely enlarged so as to enclose the filaments. Both species of Sprekelia differ from Hippeastrum in having narrower leaves and a black-coated bulb, and their pollen magnified appears a little narrower and more acute. It may be a question to be ascertained by horticultural experiments, and the examination of species yet unknown, whether Sprekelia is a section of Hippeastrum, the genus most nearly allied to it, or absolutely separate, but at present their distinction is sufficiently marked."

For the preceding matter I am indebted to the Honourable and Reverend W. Herbert. The plant now named by him *S. cybister* was given to the Horticultural Society in March last by Mr. Joseph Knight, of the nursery King's Road, who imported it from Bolivia. At that time I regarded it as a species of Hippeastrum rather than Sprekelia, and named it *H. anomalum*, considering the umbellate inflorescence and general habit to be of more importance than the incurvation of the lower sepals. In this point however Mr. Herbert's opinion is against me.

The uncoloured figures at the foot of the accompanying plate indicate the structure of some parts of the flower. No. 1. is a view in part of the interior of the ovary, and in part of the base of the perianthium and stamens cut through; it shews that the upper petaline filaments are furnished with a thin border, while all the others are tapering; and also that the filaments are separated from each other by fringed plates radiating from the style to the junctions of the sepals and petals. No. 2. exhibits the appearance of the ovary divided horizontally; the figure just over it is the stigma and upper part of the style.



W. B. Booth delᵗ

Pub by J Ridgway 169 Piccadilly June 1 1840

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TRADESCĀNTĬĂ iridēscēns.

Iridescent Tradescantia.

HEXANDRIA *MONOGYNIA.*

Nat. ord. COMMELINACEÆ.

TRADESCANTIA. *Botanical Register, vol.* vi. *fol.* 482.

T. *iridescens;* acaulis, radicibus carnosis, foliis oblongis acutis concavis glabris ciliatis subtùs pilosis, umbellis laxis terminalibus sessilibus, petalis obovatis staminibus triplò longioribus. *Bot. Reg.* 1838, *misc. no.* 160.

A detailed description of this very pretty greenhouse perennial will be found at page 86 of the miscellaneous matter of the Botanical Register for 1838, by Mr. W. B. Booth, to whom I am also indebted for the accompanying drawing, made from a plant that flowered in the garden of Sir Charles Lemon, Bart. at Carclew in Cornwall.

It is a half-hardy perennial with tuberous roots, growing in any rich soil, and flowering in July and August, each flower only lasting for a few hours. The plant is increased freely by seeds, but seldom flowers before the second season; its roots may be preserved during the winter, if kept dry in the pots, or in sand, like Cape bulbs.

Among the many described species from Mexico this seems to be the only stemless one, so that little probability exists of its being mistaken for any other. Mr. Hartweg did not meet with it.

Although its flowers are very ephemeral there is a long succession of them, and their iridescent appearance renders them extremely pretty.

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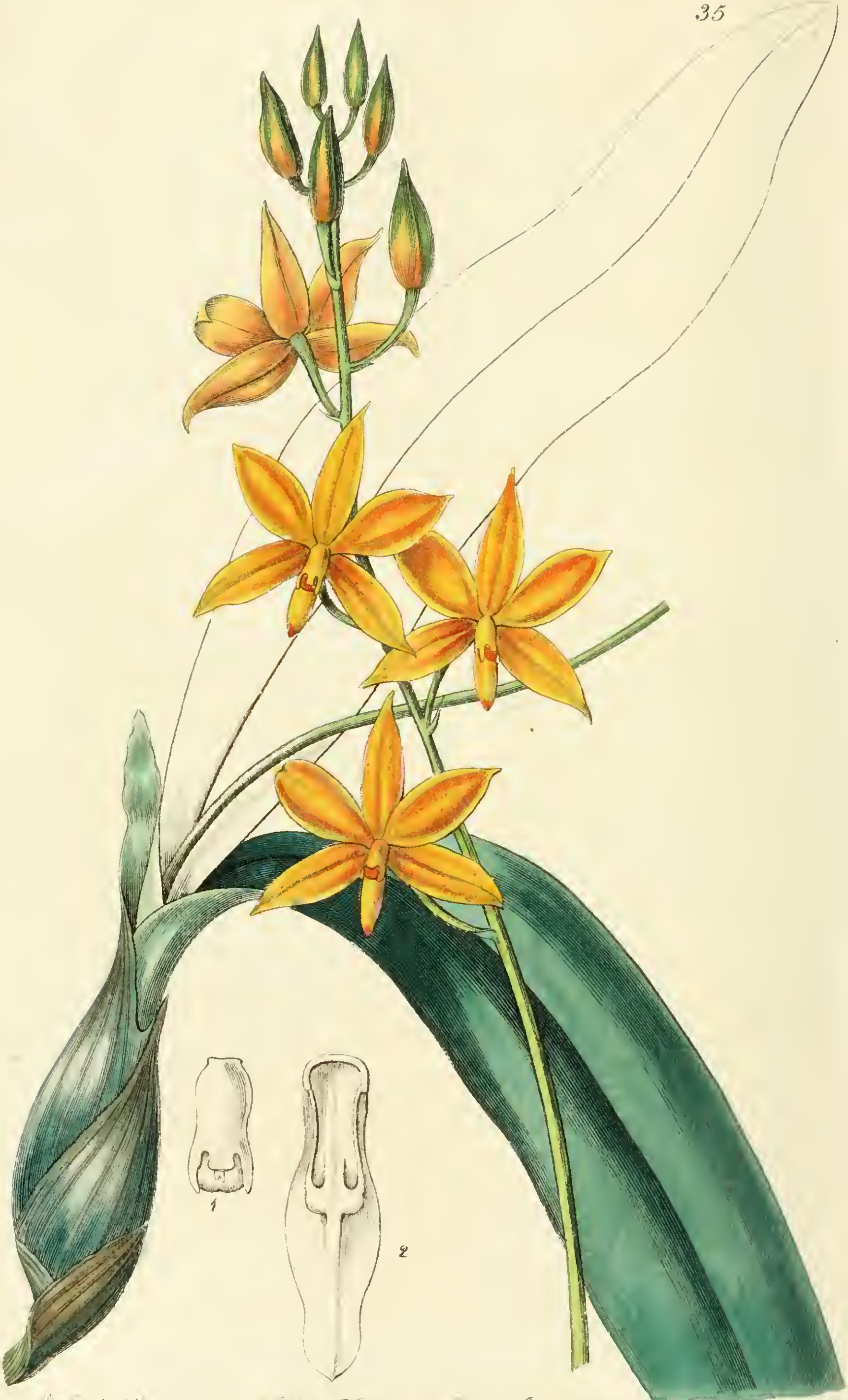

Miss Drake del. Pub. by J. Ridgway 169 Piccadilly June 1 1840 G. Barclay sc.

EPIDĒNDRŪM vitellīnum.

Yolk-of-egg Epidendrum.

GYNANDRIA *MONANDRIA.*

Nat. ord. Orchidaceæ, § Epidendreæ.
EPIDENDRUM. L.

Sect. Encyclia. *Pseudobulbosa, labello sublibero.*

E. *vitellinum;* pseudobulbis ovatis acuminatis diphyllis, foliis oblongo-ligulatis acutis basi vaginantibus racemo terminali erecto multifloro brevioribus, sepalis petalisque ovato-lanceolatis acutis subæqualibus patulis, labello lineari apice angustato abruptè acuto basi calloso et bifoveato semilibero.

E. vitellinum. *Genera & Species Orch. page* 97.

A dried Mexican specimen in Mr. Lambert's herbarium conveyed the first knowledge of the existence of this beautiful plant, and for many years no additional information concerning it was received. It was afterwards found without a locality among Karwinski's dried plants in the Munich museum, and in September, 1839, the specimen now figured produced its flowers in Mr. Barker's collection at Birmingham. Neither this, however, nor any of the dried materials, conveyed a true idea of the natural appearance of this species when in health and flowering under favourable circumstances.

It was not till specimens, collected on the Cumbre of Tetontepeque in Mexico, at the elevation of 9000 feet above the sea, were received from Mr. Hartweg, that I had any conception of the superb appearance of the plant. One of them now before me has a spike covered with fifteen large orange-coloured flowers, all expanded at once, over a space of more than six inches in length, and forming a most conspicuous object. The flowers are fully thrice as large as those now represented.

To the roots of this specimen are sticking fragments of a Jungermannia and a foliaceous Lichen, so that no doubt can be entertained of its inhabiting a damp, cool, shady situation. This certainly reveals the secret of its cultivation, and shews that a very different climate from that of East and West Indian Orchidaceæ is requisite for it. Probably it will like the management recommended for Lælias at pages 26 and 27 of this work for 1839, and most undoubtedly it must be guarded against exposure to a high temperature at any period of the year.

With reference to this subject cultivators will probably be glad to see the following extracts from Humboldt's account of the Mexican climate.

"Mexico in lat. 19° 25′, at the height of 7008 feet, has a mean temperature of 63°; that of the hottest months is from 60° to 70°; of the coldest months 50° to 59°.

"Toluca in lat. 19° 16′, at the height of 8280 feet, has a mean temperature of 59°.

"On the Puerta del Volcan, a volcanic mountain, near Toluca, at the height of 10,494 feet, the temperature of a rivulet flowing down from it is about 49°."

Humboldt does not mention Orchidaceæ in his list of plants growing within the boundary of this tierra fria; but he speaks of Peperomia umbilicata, Cheirostemon platanoides, Rosa Montezumæ which is our R. canina, Hoitzia coccinea, a Strawberry, and common Horehound, among many other plants.

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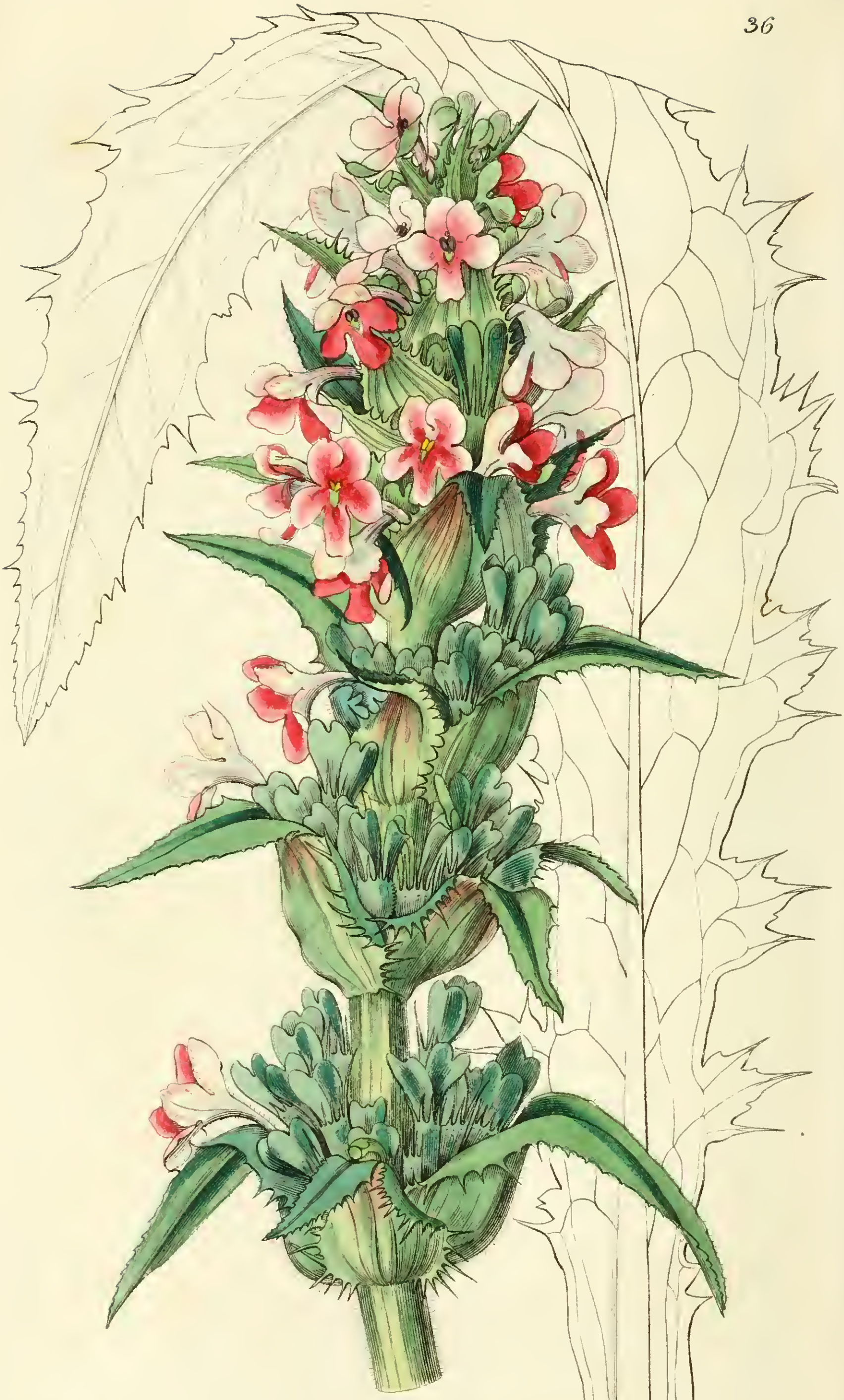

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MORĪNĂ longifŏlĭă.

Long-leaved Morina.

DIANDRIA *MONOGYNIA.*

Nat. ord. Dipsaceæ, § Morineæ.

MORINA. Tourn. Involucellum monophyllum, tubuloso-campanulatum, foveolis destitutum, margine spinoso-dentatum. *Calycis* tubus ovatus, limbus foliaceus bifidus, lobis oblongis integrisve bifidis. *Corolla* longè tubulosa, ringens. *Stamina* 4, nunc libera didynama, nunc binatìm diadelpha. *Stigma* peltato-capitatum. *Fructus* calycis lobis coronatus, involucello cinctus.——Herbæ *perennes,* Cardui *facie, simplices, erectæ.* Folia *oblongo-sinuata, dentato-spinosa, rariùs integerrima.* Flores *in foliorum superiorum axillis aggregato-verticillati.* Folia *floralia breviora, ferè palmato-dentata.* DC. Prodr. 4. 644.

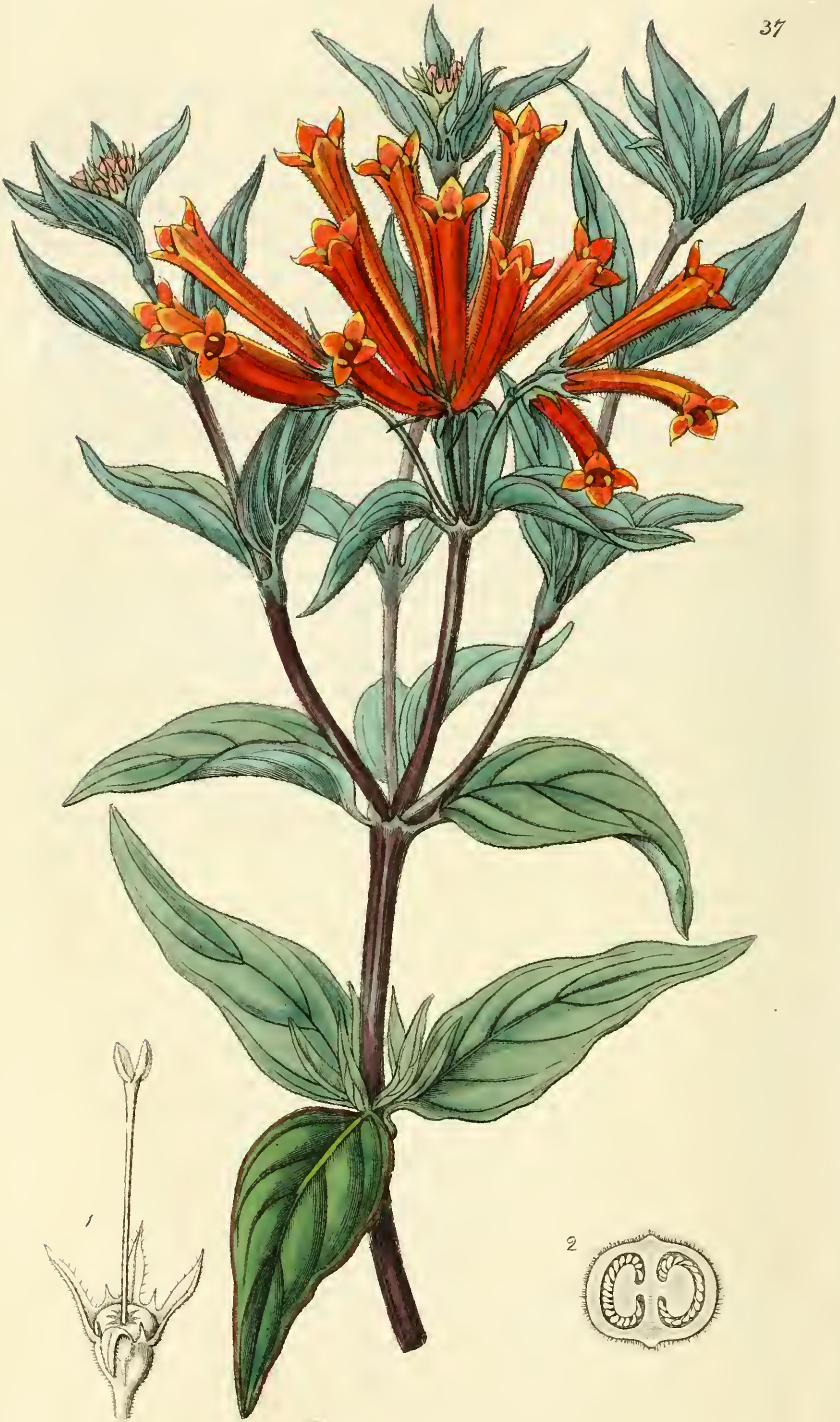
M. *longifolia;* foliis sinuatis spinoso-dentatis floralibus corollis rachique subvillosis, calycis lobis cuneato-oblongis emarginatis, floribus diandris.
M. longifolia. *Wall. Herb. Ind. no.* 426. *DeCand. Prodr.* 4. 644.

The Morinas are handsome oriental herbaceous plants, the original species of which, M. persica, was found near Erzeroum, in the valley of the four mills, by Tournefort, during his residence in that town. In one of these mills, says he, we proceeded to name one of the finest genera of plants in the Levant, to which we gave the name of a person highly estimable for his science and virtue, M. Morin, of the Royal Academy of Science, Doctor of Medicine of the Faculty of Paris, who has since had the singular good fortune to raise this plant from seed in his garden, it having succeeded no where else. The flower seems formed to bear the name of M. Morin, who is passionately devoted to Botany.—*Smith in Rees' Cyclopædia.*

Of the produce of that plant, or of others found in Greece by Mr. Hawkins, or brought from Persia by Olivier, our gardens have long lost all trace, and the periodical Botanical books of this country contain no figure of it. There is however a noble representation of *M. Persica* in the costly Flora Græca.

The species now figured is one of those discovered by Dr. Wallich on the mountains of the north of India ; Gossain Than is the district more particularly mentioned as the native country of the plant, of which seeds were given by Professor DeCandolle to the Horticultural Society, in whose garden it flowered in November last. It is an exceedingly handsome and nearly hardy perennial, growing from two to three feet high in any dry situation, and requiring about the same treatment as Acanthus mollis ; but it suffers from wet in winter, and consequently should be planted in a strong dry soil, and protected during winter by a hand-glass. It is increased freely from seeds, and flowers from July till late in the autumn. The stem is covered with soft hairs, which, when bruised, emit the smell of a Geranium.

In DeCandolle's Prodromus the stamens of Morina persica are described as four combined in pairs, although to all appearance there is but two. This singular speculation originated with Dr. Coulter, who seems to have been led to adopt it by finding the anthers of Morina persica four-celled instead of two-celled. But this circumstance is now known to be the typical structure of all regular anthers, and I can find nothing in M. longifolia to justify the theory. Indeed the three missing stamens of Morina are undoubtedly represented by a kidney-shaped three-lobed gland at the base of the corolla.



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* BOUVĀRDĬĂ triphy̆llă; *var.* splendens.

Scarlet Bouvardia.

TETRANDRIA *MONOGYNIA.*

Nat. ord. CINCHONACEÆ.
BOUVARDIA. Botanical Register, vol. ii. *fol.* 107.

B. triphylla. *Supra l. c.*
B. Jacquini. *DC. Prodr.* 4. 365.
Ixora ternifolia. *Cav. ic.* 4. *t.* 305.
Houstonia coccinea. *Bot. Rep. t.* 106.

Var. *splendens;* omni parte pilosiore, corollis majoribus et magis coccineis.
Bouvardia splendens. *Bot. Mag. t.* 3781.

Messrs. Humboldt and Kunth altered the old and common name of *B. triphylla* into that of B. Jacquini; and the excellent DeCandolle, whose judgment is usually so good, adopted the innovation, apparently because there are other species of Bouvardia with three leaves in a whorl. But if such a reason were to have any weight, it would be necessary to make in Botanical nomenclature an enormous number of alterations, besides those, already too numerous, which the progress of discovery renders inevitable. The change of the name in the present instance ought therefore to be resisted, as uncalled for by any sufficient necessity.

The plant now figured is certainly a variety of *B. triphylla*, from which it differs indeed in its more scarlet, brighter, and larger flowers, its more pubescent surface, its more vigorous habit, and in the deep purple stain upon all its branches; but there is no solid mark of distinction. It has however been regarded by Dr. Graham as a distinct species, and so published in the Botanical Magazine, with the name of *B. splendens*, under which it is to be found in many nurseries.

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* See Botanical Register, fol. 107.

It must be confessed that the specimen figured in the Magazine would seem to justify the opinion, but it will be seen by the plate now given that the peculiar habit which the plant acquired in the Edinburgh Garden was not permanent, and that under other circumstances it has the well-known appearance of the original *B. triphylla.* It is certain that the specimen now figured, and that of the Magazine, do really represent the same identical plant, because they were both taken from the same source; namely, the garden of the Horticultural Society.

The country owes this to George Frederick Dickson, Esq. F.H.S. who presented its seeds to the Horticultural Society.

It is a half-hardy shrub, flowering from May to October, if planted out in the American border, or any other favourable place where neat pretty plants are required. The roots will live in the open border all winter, but should be protected by a hand-glass or a large flower-pot inverted, in order to keep them dry; for this, like many Mexican plants, suffers more from wet than from cold.

The best way to treat it, and indeed all the Bouvardias, is to plant them out in the American border about the end of May; and after flowering in the autumn, or rather when partially damaged by frost, to take them up and pot them, putting them into as small pots as possible, and then placing them under the stage of the greenhouse, or in any dry cellar. In fact they may be treated in the same way as the common scarlet Geranium, only observing to keep them rather dry during winter. In the spring (end of February) they should be taken out, fresh potted, and placed in a more favourable place for growing, so as to be again ready for planting out.

It is very easily increased by the roots from the young shoots. In the spring, before the plant begins to grow, the roots should be cut into pieces about two and a half or three inches long, both large and small, and inserted in pots filled with any light sandy soil, leaving but a small portion of the root above the surface. If then placed upon a moderate hotbed they will soon begin to grow, and will make good plants by the end of May.

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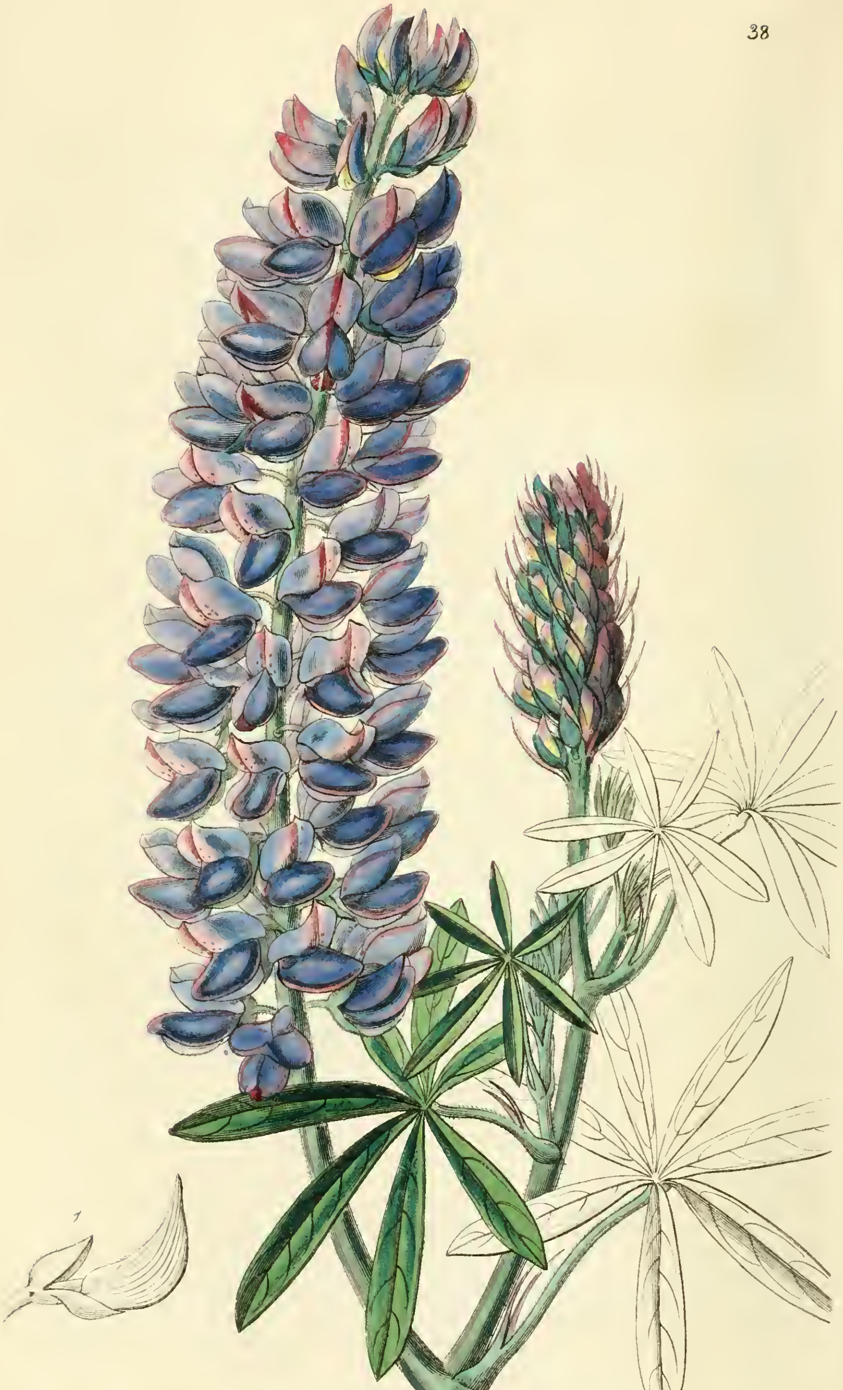

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LUPĪNŬS leptocărpŭs.

Slender-fruited Lupine.

DIADELPHIA *DECANDRIA*.

Nat. ord. LEGUMINOSÆ, § PAPILIONACEÆ.
LUPINUS. Botanical Register, vol. 13. *fol.* 1096.

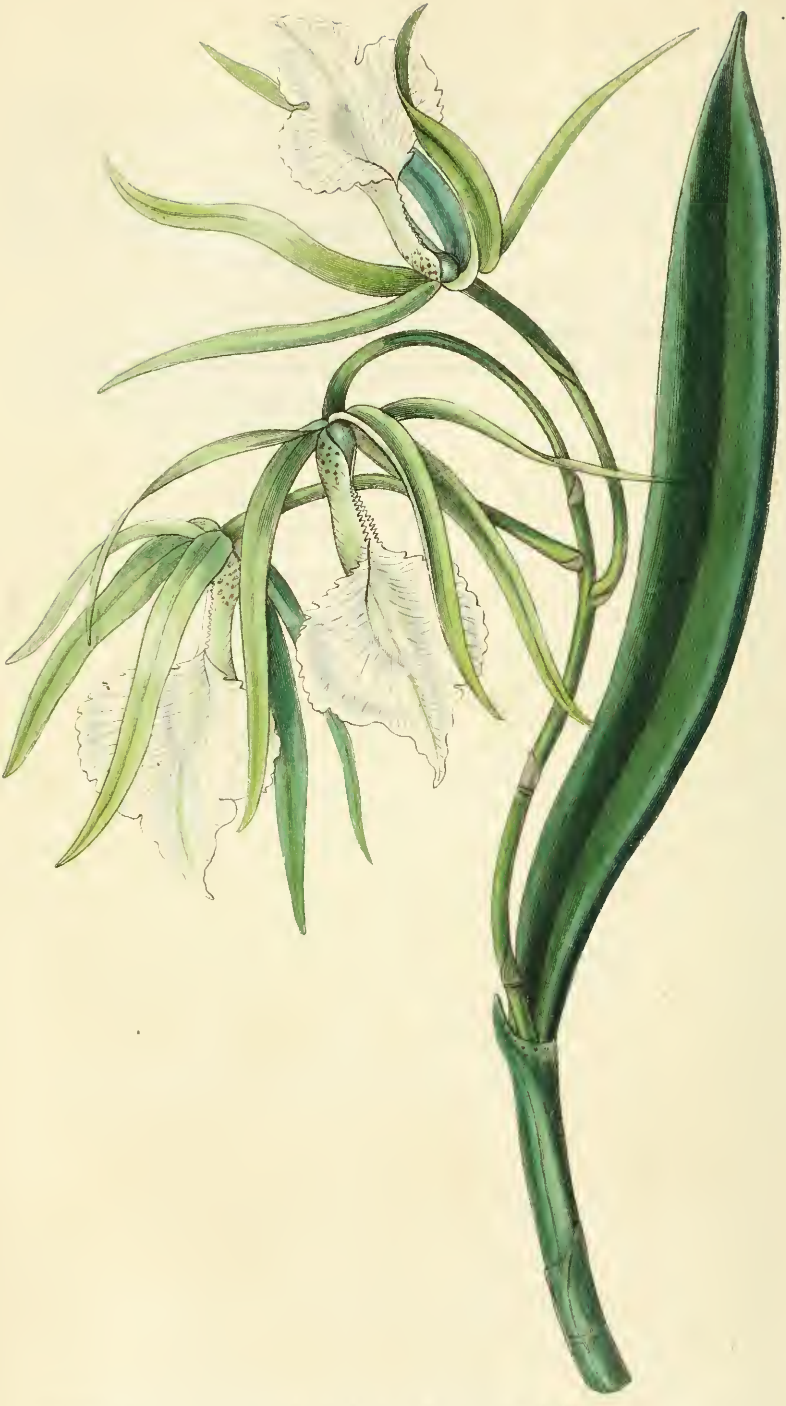
L. *leptocarpus;* biennis, decumbens, vix canescens, foliolis 7-9 oblongo-lanceolatis obtusiusculis mucronulatis suprà glabris subtùs adpressè puberulis, stipulis setaceis, floribus densè racemosis, bracteis pilosis valdè deciduis alabastris obtusiusculis longioribus, calycis ebracteolati adpressè pubescentis labio superiore basi subgibbo, leguminibus elongatis breviter et adpressè pubescentibus. *Bentham Plant. Hartw. no.* 61. *p.* 11. quibusdam mutatis.

A hardy straggling biennial plant, growing two or three feet high, and blossoming in the latter part of summer and autumn, when it becomes a very gay decoration of the flower garden. It has much the habit of *L. rivularis,* to which indeed it nearly approaches.

In the very difficult genus Lupinus it is hard to say what positive characters separate plants, which nevertheless have all the appearance of being distinct species, and any one much acquainted with the genus must feel that some better marks of distinction than are at present employed would be desirable. The relative length of the bracts and unexpanded flowers, and the form of the latter are doubtless of great importance, but it is to be expected that the form of the pods, and the number, size, form, and surface of the seeds are also deserving of particular attention. That the latter offer the best means of distinguishing the European annual Lupines is well known, and it is probable that the exotic species differ in a similar way.

If however these marks may be depended upon, it is also necessary to observe that the shrubby or herbaceous texture of the stem is not to be judged of from dried specimens, and that such differences are in all cases to be distrusted, unless they have been observed upon the living plant. For instance this plant, which the dried specimens induced Mr. Bentham, as they would have done any one else, to regard as a shrub is in reality a mere biennial.

The drawing was made in the garden of the Horticultural Society where it had been raised from seeds collected by Mr. Hartweg in Pine woods near Bolanos, at the elevation of 8000 feet above the sea.



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BRASAVŌLĂ venōsă.

Vein-lipped Brasavola.

GYNANDRIA *MONANDRIA.*

Nat. Ord. ORCHIDACEÆ § EPIDENDREÆ.
BRASAVOLA. *Botanical Register, fol.* 1465.

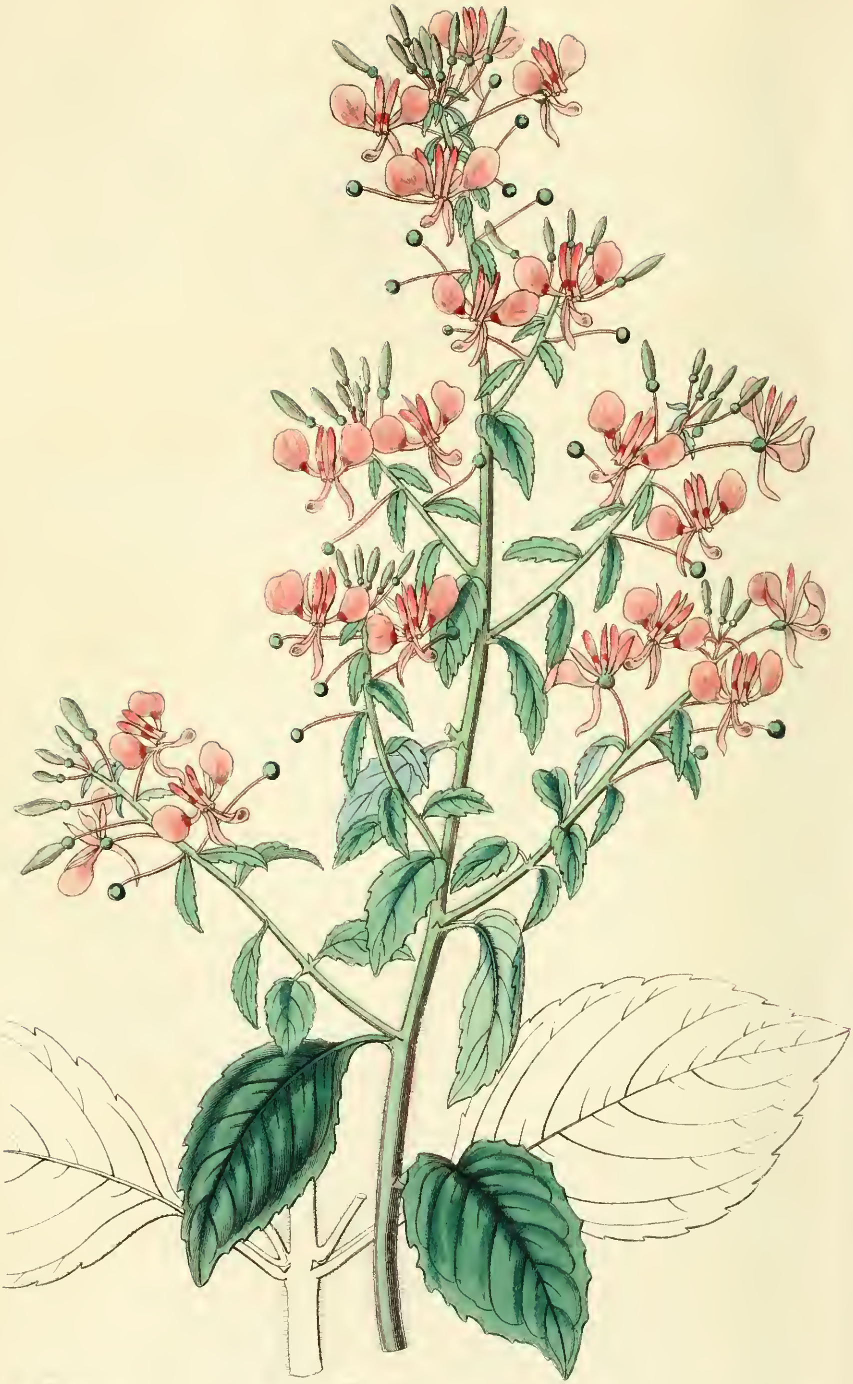
Brasavola *venosa;* folio lanceolato semicylindraceo supra canaliculato, sepalis petalisque linearibus, labelli ungue longo complicato laminâ subrotundo-ovatâ subtrilobâ acuminatâ basi serratâ: venis elevatis. *Bot. Reg.* 1840. *misc. no.* 24.

Folium *semipedale, carnosum, lineari-oblongum, acutum, atroviride, canaliculatum marginibus rotundatis, nec ut in speciebus pluribus in cylindrum convolutum.* Scapus *folio brevior, spathâ nullâ conspicuâ, sed squamis paucis vaginatus, 3-florus; bracteis parvis rigidis acutissimis.* Sepala *et* petala *linearia, acuminata, virentia, 2-pollicaria, inter se æqualia.* Labelli *lamina candida, venis elevatis corrugata, subrotundo-ovata, acuminata, subcarnosa, integra v. obsoletè triloba, basi serrata; unguis laminâ parùm brevior, convoluta, margine serrata, basi integerrima et maculis quibusdam sanguineis notata.*

A fine species resembling *B. nodosa* in habit, but with much larger flowers, the sepals being more than two inches long. The lip is white, the other parts greenish. It is at once distinguished from *B. nodosa* and all the allied species by the firmness of the lip, which is more or less evidently lobed at the side, and has the veins distinctly elevated. The flowers are deliciously sweet at night. Messrs. Loddiges imported it from Honduras.

The leaf is intermediate between that of *Br. glauca* and the common terete species; and shews that in the latter the leaf owes its peculiar appearance in part to a general thickening of its parenchyma, and in part to the edges turning inwards, meeting and growing together. And this is no doubt also the origin of the terete leaves found in Vanda, Luisia, and Dendrobium.

It has been recommended to grow the plants of this genus in well-drained pots, and they grow very freely under such circumstances ; but they certainly do better when hung from the roof or pillars of the stove. The only thing to be attended to in the latter mode of culture is, to tie upon the block of wood along with the plant some pieces of turfy peat to keep the roots moist ; the roots will soon fix themselves into the peat, and throw their tender points into the air and feed upon it.



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* LOPĔZĬĂ lineātă.

Line-leaved Lopezia.

MONANDRIA *MONOGYNIA.*

Nat. ord. ONAGRACEÆ.

LOPEZIA. Cav. Calycis limbus 4-partitus deciduus. *Petala* 4 irregularia. *Stamina* 2, uno fertili antherifero, altero opposito sterili, petaliformi, a petalis veris sæpiùs discolore. *Stigma* capitatum. *Capsula* nuda, subglobosa, 4-locularis, apice tantùm loculicido-4-valvis; valvis placentæ centrali dissepimentis adnatis. *Semina* plurima, minima.——Herbæ *erectæ, aut* suffrutices. Folia *dentata, alterna, sæpiùs opposita.* Racemi *caulem ramosque terminantes.* Flores *pedicellati, purpurei.* DC. prodr. 3. 62.

L. *lineata;* frutescens, caule petiolisque hirsutis, foliis breviter petiolatis e basi rotundatâ ovatis acutis crenato-serrulatis utrinque pubescentibus, venis approximatis costatis supernè lineatis, pedunculis glabris, glandulâ in petalorum superiorum (angustiorum) ungue basi rotundatâ solitariâ. *Zuccarini Plantarum Novarum minùs v. Cognitarum fasciculus* 2. *p.* 31. *no.* 13. *Benth. Plant. Hartweg. p.* 37. *no.* 287.

A pretty soft-wooded greenhouse shrub, growing about three feet high, and flowering freely during the latter part of autumn and winter.

It is easily increased by seeds, grows rapidly in any good garden soil, and might be treated as a half-hardy annual, but in that case it must be brought forward early in the spring; otherwise flowering so very late it is destroyed by the frost before its blossoms unfold.

It is chiefly valuable in the months of January and February when it is covered by little insect-like red flowers, and is at that time so different in appearance from other plants of the season, that it becomes a doubly welcome acquisition.

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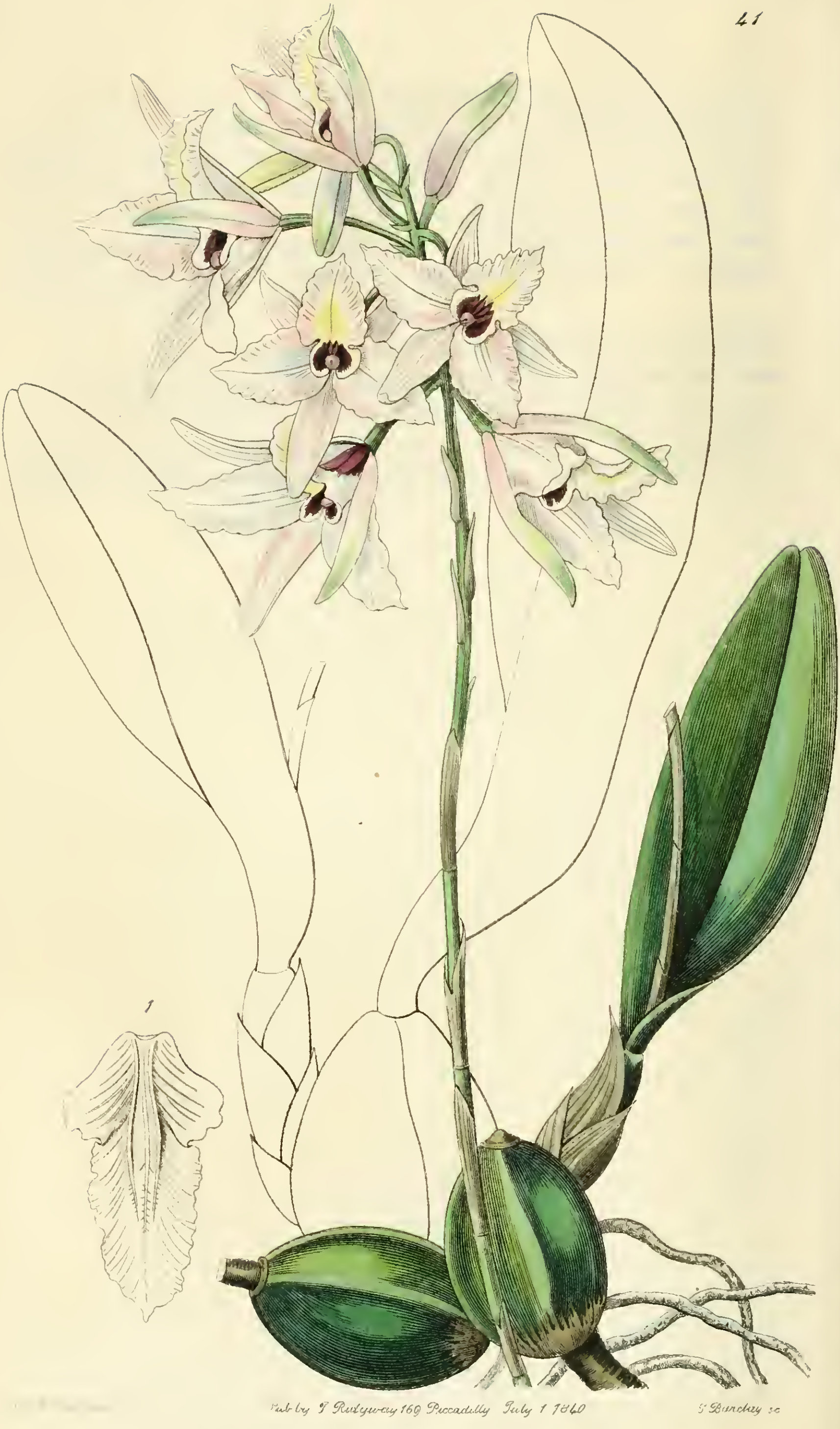
* So called by Cavanilles after the Licentiate Thomas Lopez, an obscure Spanish naturalist.

Professor Zuccarini first described the species in his account of the new plants cultivated in the Botanical Garden of Munich, where it was raised from Mexican seeds collected by Count Karwinski. The supply, from which the plants now in our collections have been obtained, has however been furnished by the Horticultural Society, to whom seeds were sent by Mr. Hartweg, who found the species in Mexico, in a place called the *Banco.*

Those who are students of the British Flora will not fail to recognise in this gay Lopezia, the same features as those of our own little Enchanter's Nightshade, with which it is associated in a natural arrangement. In this plant the second stamen of Circæa is converted into a spoon-shaped petal.



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LǢLĬĂ rubēscēns.

Blushing Lælia.

GYNANDRIA *MONANDRIA.*

Nat. ord. Orchidaceæ, § Epidendreæ.
LÆLIA. *Botanical Register, vol.* xxi. *fol.* 1751.

Lælia *rubescens ;* pseudo-bulbis subrotundis compressis utrinque angulo elevato, foliis oblongis obtusis scapo tereti vaginato brevioribus, racemo multifloro, bracteis ovario plus duplò brevioribus, sepalis linearibus, petalis lanceolatis subundulatis, labello conformi auriculato medio pubescente : lineis duabus elevatis. *Bot. Reg.* 1840. *misc. no.* 25.

Pseudobulbi *oblongi, compressè tetragoni, vix sesquiunciam longi.* Folium *solitarium, coriaceum, oblongum, planiusculum, quasi emarginatum, scapo gracili erecto squamato multò brevius.* Racemus *brevis, multiflorus.* Bracteæ *lineares, murcescentes, ovario plus duplò breviores, carinatæ, pilis brevissimis minutissimis fasciculatis pubescentes.* Flores *L. primulinâ paulò minores et minus patentes.* Sepala *linearia, obtusa, pollicaria, basi rubescentia, apice virescentia, recta, petalis paululùm longiora.* Petala *lanceolata. acuta, subundulata, secus margines rubentia.* Labellum *ovato-lanceolatum, versus basin auriculatum, apicem versus undulatum, acutum, medio luteum et subpubescens, lineis duabus elevatis tertiâque intermediâ minus conspicuâ, basi atropurpureum convolutum.*

This pretty species of Lælia has the smallest flowers of any yet discovered, and they are wholly scentless. It was bought at the nursery of Mr. Joseph Knight, in the King's Road, by Mr. Barker of Birmingham, to whom I am indebted for a specimen. No wild specimen has yet been seen, and I am unacquainted with the source from which Mr. Knight obtained it.

It is most nearly related to the fragrant *L. primulina,* from which it differs in the form of its pseudo-bulbs, leaves and labellum, in the size of the flowers, and in the petals not being at all revolute.

In the specific character originally given it the bracts were described as pubescent. This appearance arises from the presence of minute patches of extremely delicate hairs, which soon wither up, and leave nothing but a stain to indicate their having been present.

The best and most natural way to cultivate it, is to hang it from the roof of the stove, and allow its roots to imbibe the moisture of the atmosphere. This is one of those orchidaceous plants which will succeed in a lower temperature than that which most of them are grown in, but like the others it requires a moist atmosphere and shade. It must be kept perfectly dry when in a state of rest, but should be freely watered and syringed when growing.

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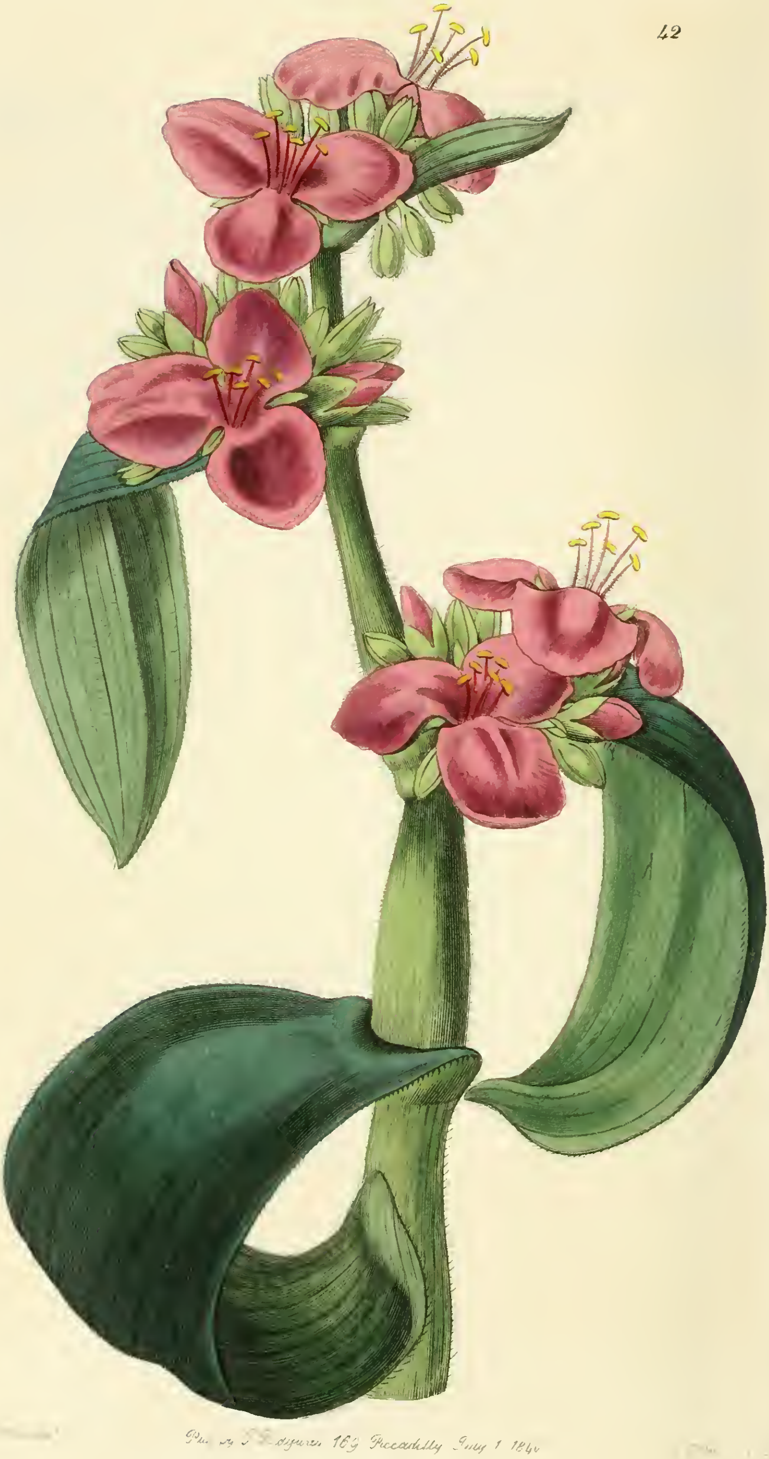


Pub. by J. Ridgway 169 Piccadilly Aug 1 1840

TRADESCĀNTĬĂ tūmĭdă.

Gouty-jointed Spiderwort.

HEXANDRIA *MONOGYNIA.*

Nat. ord. COMMELINACEÆ.

TRADESCANTIA. Botanical Register, vol. vi. *fol.* 482.

T. *tumida;* caulis erecti pilosi internodiis tumidis, foliis vix vaginatis oblongis revolutis convexis margine et infra pilosis, umbellis sessilibus axillaribus et terminalibus multifloris, sepalis pilosis, petalis ovatis concavis mox convexis.

A Mexican half-hardy herbaceous plant, raised in the garden of the Horticultural Society, where the accompanying figure was made in September, 1839.

When young its leaves are purple on the under side; but this colour is afterwards lost, and they become a very deep green. Their peculiar rolled-back direction, and the tumid joints by which they are separated, gives this species a very unusual appearance, and appears to separate it from *Tr. Humboldtiana,* with which it otherwise seems to agree in many respects, so far as can be ascertained from the description that has been published of that species.

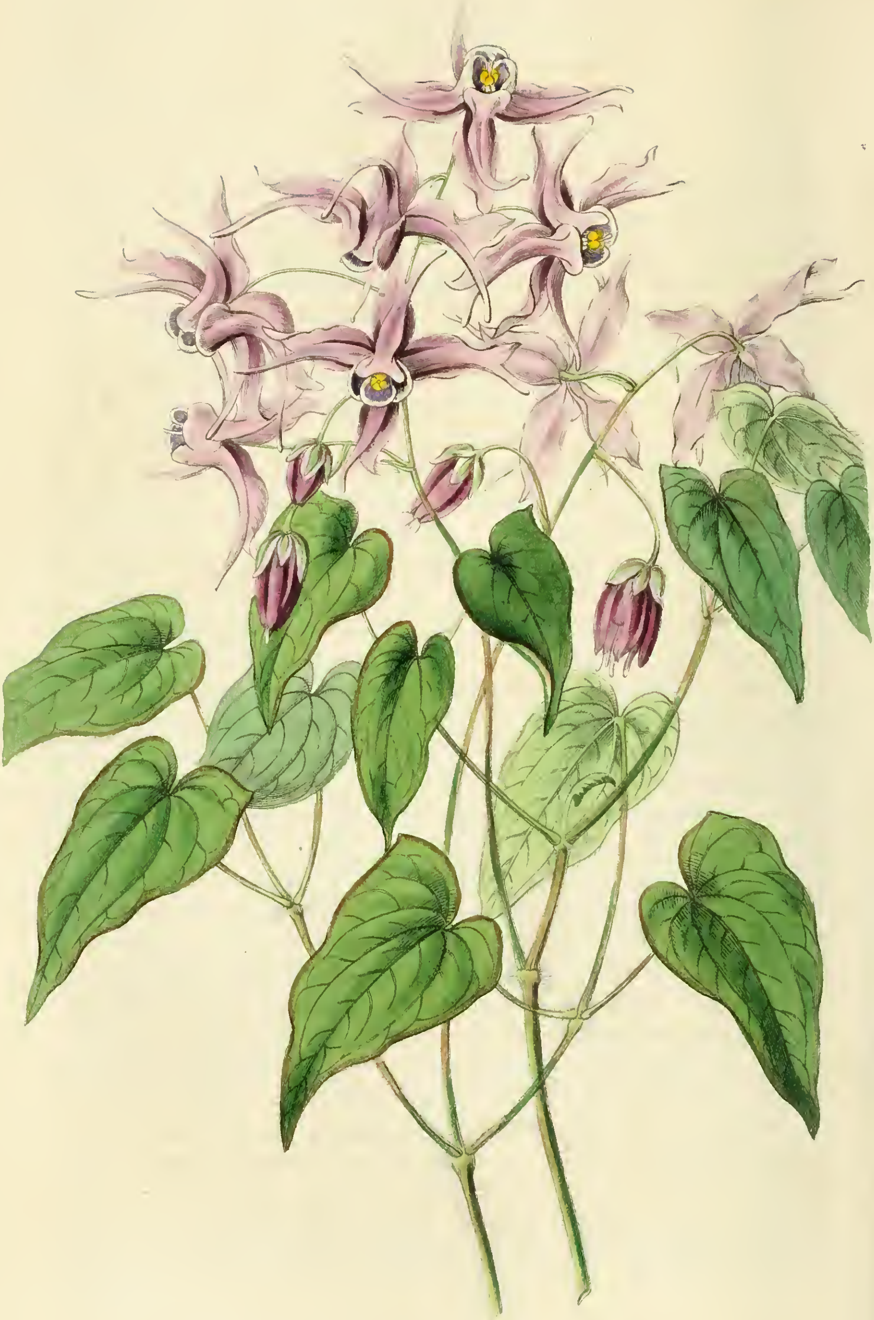
It is a greenhouse perennial of the most easy cultivation, having the same habits as the hardy species common in every garden. It grows freely in sandy loam, but is very apt to suffer from much wet or damp in winter. Like the other species of the genus it is readily multiplied, either by cuttings, layers, or seed.

The following account of the Tradescants, after whom the genus is named, was given by the late Sir James Smith.

"John Tradescant, one of the fathers of natural history in England, having been the first who made any considerable collection of natural productions, as well as one of the earliest cultivators of exotic plants in this country, is reported by Anthony Wood to have been a Dutchman. His name nevertheless appears to be English, and was originally of two syllables, *Trade*-scant, though it subsequently became Tra-des-cant, as appears from a line in his family epitaph,

'———————— beneath this stone,
Lies John Tradescant, grandsire, father, son.'

Dr. Pulteney thinks he was not settled in England during the life of Gerarde, though often mentioned in the second edition of that author's Herbal, by its editor Johnson, as well as in Parkinson's works. He is recorded to have been for a considerable time in the service of the lord-treasurer Salisbury, and Lord Wooton. He travelled into various parts of Europe, even as far as Russia; and was on board a fleet sent against the Algerines in 1620. He brought home plants and other curiosities from these various excursions, but it does not appear what was their primary object. About the year 1629 he obtained the title of Gardener to King Charles I. and about that time, or before, was settled at Lambeth, where his own garden was situated. Some remains of this were traced out by Sir William Watson 120 years afterwards. Tradescant's Ark, or Museum, became very famous as a collection of natural rarities. It was much visited by the great, and even by the royal family, all of whom took pleasure in enriching it, as in later times their descendants have done to other such collections. A catalogue of the *Museum Tradescantianum*, in 12mo., appeared in 1656, with portraits of the owner and his son engraved by Hollar; of which however most of the copies are plundered by mere print collectors, careless of the value of any thing beyond their own object. By this catalogue the museum appears to have been furnished, not only with birds, quadrupeds, fish, shells, insects, minerals, fruits, &c. but also with warlike instruments, habits, utensils, coins, and medals. There is annexed a catalogue in English and Latin of the plants cultivated in the author's garden. This portrait represents him as greatly advanced in age at this period, but the time of his death is not known. His son, of the same name, visited Virginia, and returned with several new plants; amongst others the original Tradescantia. This son inherited his father's collections, and, dying in 1662, bequeathed them to Mr. Elias Ashmole, so that they may be said to have laid the foundation of the Ashmolean Museum at Oxford, in which they, like the name of their original owner, are now sunk. The widow of the younger Tradescant, the mother probably of the grandson mentioned in the epitaph, is said to have erected the curious and rather splendid tomb, remarkable for its allusive decorations, which still exists in Lambeth church-yard. See Dr. Ducarrel's account of this monument, in the 63rd volume of the Philosophical Transactions."



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* EPIMĒDĬŪM violācĕūm.

Violet Epimedium.

TETRANDRIA *MONOGYNIA.*

Nat. Ord. Berberaceæ.
EPIMEDIUM. *Botanical Register, vol.* 22. *fol.* 1906.

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§ *Macroceras;* calcaribus petalorum elongatis.

E. *violaceum;* foliis triternatis: foliolis cordatis sagittatisque acuminatis ciliatis integerrimis, petiolorum nodis barbatis, floribus racemosis, petalis calcaribus subæqualibus.

E. violaceum. *Morren & Decaisne in Ann. des Sc. nat. n. s. II.* 354. *t.* 12. *A.*

Caulis 4-6 *poll. longus, subflexuoso-geniculatus, teres, ad foliorum insertionem intumescens, epidermide rubro-fuscâ vestitus, pube albâ laxâ flexuosâ ad nodos crebriore pilosus.* Folia *triternata, petiolata;* petiolus communis *brevis, semi-pollicem longus, coloratus,* partiales 2-4 *poll. longi, patuli, teretes, villosi, virides;* petioluli 1½-2 *longi.* Foliola *cordata, acuminata, integra; terminale æquilaterum,* 2 *inferiora obliqua, lobis rotundatis vel subacuminatis; juniora colorata, margine intensè purpurea, membranacea, utrinque præsertìm subtùs molliter puberula, demum glabrata; intensè viridia, ciliata, basi* 3-5-*nervia, reticulato-venosa, venis primariis supernè evanescentibus.* Pedunculi *oppositifolii, foliis longiores, poll.* 4 *circiter longi, simplices, pauciflori, recti, firmi, teretes, glaberrimi.* Flores *speciosi, violacei, lin.* 14 *lati, pedicellati, pedicellis cernuis, basi bracteolatis, puberulis.* Calyx 3-4-*sepalus;* sepalis *inæqualibus,* 2 *exterioribus minoribus, ovatis viridibus rubro-coloratis.* Petala *ovata-lanceolata, æqualia, calycinis foliolis sub triplò longiora, margine subsinuosa, rubro-violacea, nectariis paulò breviora.* Nectaria 4, *petalis longitudine subæqualia, longè calcarata, attenuata, assurgentia, intensè violacea.* Stamina 4, *ovario sublongiora, pistillo breviora;* filamenta *brevia, crassiuscula, glaberrima;* antheræ *lineares, oblongæ, flavæ.* Stylus *sublateralis, ovario subæqualis, apice subincrassatus, glaberrimus;* stigmate *discoideo plano coronatus.* Ovarium *ovoideum, glaberrimum, viride, pluriovulatum.* Morren & Decaisne l. c.

The little dingy *Epimedium alpinum*, known only in the gardens of Botanists, gave no promise of its representing a line of beautiful herbaceous plants, and for a long time it was supposed to be the only one of its race. The researches

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* Botanical Register, vol. 22. fol. 1906.

August, 1849.

however of modern travellers have brought to light the existence of five others. Of these *E. macranthum*, a beautiful species with pale violet flowers has already been figured in this work; that now represented is a second; and we have the *Epimedium Musschianum*, with large white flowers, which is yet handsomer than either. All these are Japanese plants, for the introduction of which to Europe the public is indebted to Dr. Siebold. The other two are *E. pubigerum* an inconspicuous species from Constantinople and *E. elatum*, a plant 2 or 3 feet high, with dull yellowish brown flowers, discovered in Cashmere by Jacquemont.

That now represented is a very neat hardy Alpine perennial, requiring the same treatment as other Alpines, and like all such plants suffering equally from the extremes of wet and dry.

It flowers in April and May, and may be increased by division of the roots when in a dormant state; but like the other species of the genus has *never yet been found to seed.*

Our figure was taken from a plant presented to the Horticultural Society by Mr. Groom, of Walworth.

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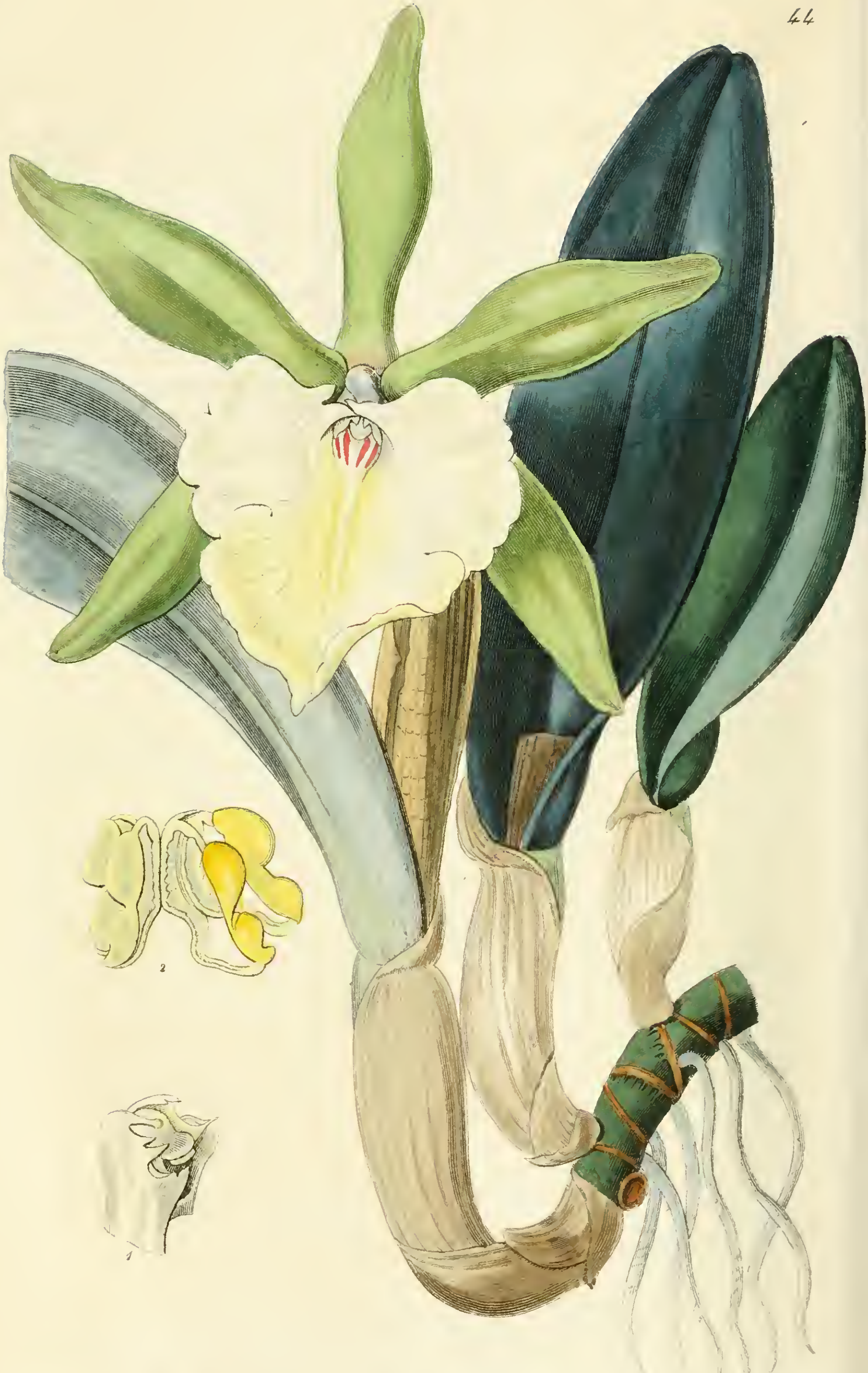

Pub by J Ridgway 169 Piccadilly Augt 1 1840

G Barclay sc

BRASAVŌLĂ glaūcă.

Glaucous Brasavola.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDACEÆ, § EPIDENDREÆ.
BRASAVOLA. *Botanical Register, fol.* 1465.

B. *glauca;* foliis coriaceis oblongis obtusis planiusculis glaucis, spathâ unifiorâ, sepalis petalisque lineari-lanceolatis obtusis herbaceis, labello subsessili subrotundo acuto margine lobato, clinandrio dentato dente dorsali apice glanduloso. *Bot. Reg.* 1839, *misc. no.* 67.
B. glauca. *Bateman's Orchidaceæ of Mexico and Guatemala, t.* 16.

It is said that this charming plant was originally found near Xalapa in Mexico, by Henchman, and that it was afterwards imported more abundantly by a Frenchman of the name of Deschamps, who brought over a large quantity of Orchidaceæ and Cacti for sale some years ago.* To me it was first made known by its having been gathered near Vera Cruz by Mr. Hartweg, who sent it among his earliest consignments to the Horticultural Society. It has since been received from Guatemala, where Mr. Skinner found it growing on the oaks of the country in company with *Cyrtochilum maculatum* var. *Russellianum*, like which he directs it to be treated. He calls it "a splendid white flower, with a most extraordinary strong aromatic fragrance." It is certainly very handsome and sweet; but not so much with us as it appears to be in Guatemala.

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* Upon this subject Mr. Bateman has given the following note in his splendid work above quoted. "This importation was quite unique in its way, and formed a sort of epoch in the history of the *Orchido-mania.* A vessel came into port freighted, almost exclusively, with Epiphytes and *Cacti,* and such was their abundance, that it was found necessary to engage an extensive suite of apartments, for their accommodation, in Hungerford Market! The plan pursued by M. Deschamps was, to parcel out his plants in small collections of about twenty species, for which, in the first instance, he asked and obtained very high prices; but the London market being at length exhausted, similar collections were distributed through the provinces, and offered at greatly reduced rates. The author himself purchased, in a country town, a set of at least twenty kinds for a sum which, in the metropolis, he had in vain tendered for only two! In case of any future inundation of Orchidaceæ, this little fact should be borne in mind."

Its aspect is not that of a *Brasavola*, but rather of a *Cattleya*, to which genus it was thought that it would belong: but as soon as the flower appeared it was found to be a true *Brasavola*, with all the characters that peculiarly mark that genus. Like others it has the anther-bed lacerated, but the dorsal tooth is tipped with a glandular swelling. Fig. 1. represents this; and fig. 2. the pollen-masses, artificially separated so as to show the large size of the powdery elastic straps that hold them together.

This is found as easy to cultivate as any of the other Mexican Orchidaceæ, requiring a damp warm atmosphere when growing, and to be kept cool and dry when in a state of inaction. It will succeed either suspended from the roof of the house upon a block of wood, or in a well drained pot, the only difficulty in its cultivation being in inducing it to blossom. Upon this subject I have received the following note from Mr. Fortune, who has succeeded in making it flower freely in the garden of the Horticultural Society.

"At the base of every leaf there is a bud, and from the leaf itself the flower springs, which in many instances proves abortive, apparently owing to the luxuriance of the bud at its base. As a proof of this—after many fruitless attempts to make this plant flower—one of these buds was removed, which allowed the sap intended for the nourishment of that bud to go to the formation of the flower, and the result was the production of the subject of the present plate. In the following season the plant was covered with flowers upon the same principle, though not at the expense of its buds. This was done by keeping it dry and not allowing the buds at the base to grow much until the flower stems were so far advanced as to be out of danger."

It is easily propagated by division.

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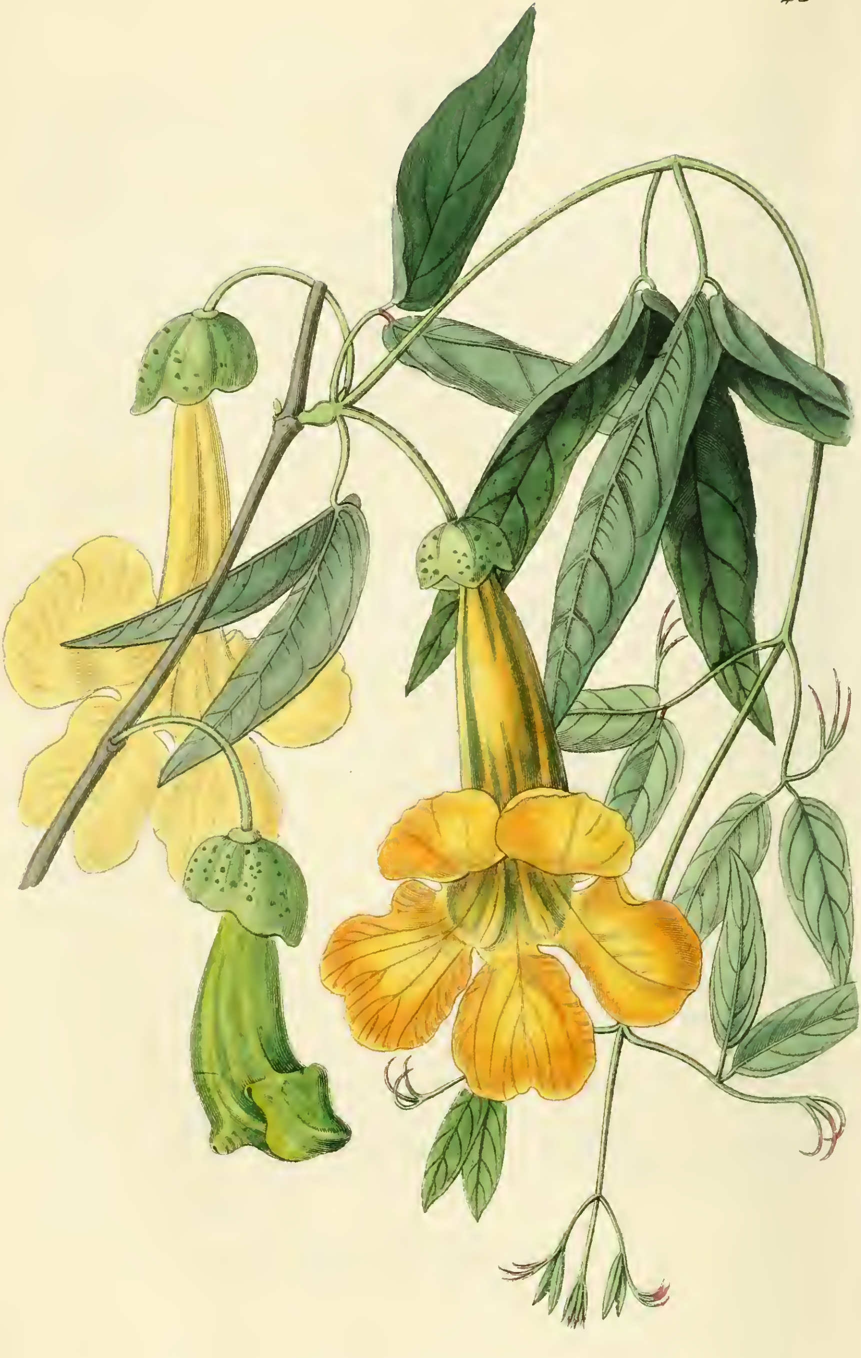

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Pub. by J. Ridgway 169 Piccadilly Aug. 1 1840

G Barclay

BIGNŎNĬĂ Tweedīană.

Tweedie's Bignonia.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. BIGNONIACEÆ. Trib. 1. BIGNONIEÆ *Bojer.*
BIGNONIA. *Botanical Register, vol.* iii. *fol.* 249.

B. *Tweediana;* foliis conjugatis, foliolis lanceolatis acuminatis apice subaristatis petiolis leviter pubescentibus, pedunculis unifloris flore brevioribus, calyce bilabiato oblique truncato sub 5-lobo labiis utrisque rotundatis supremo majore, corollæ glaberrimæ limbo altè 5-partito ciliato : laciniis rotundatis emarginatisque tubo gracili duplò brevioribus.

For this new Bignonia we are indebted to the Hon. W. F. Strangways, by whom it was imported from Buenos Ayres in 1838.

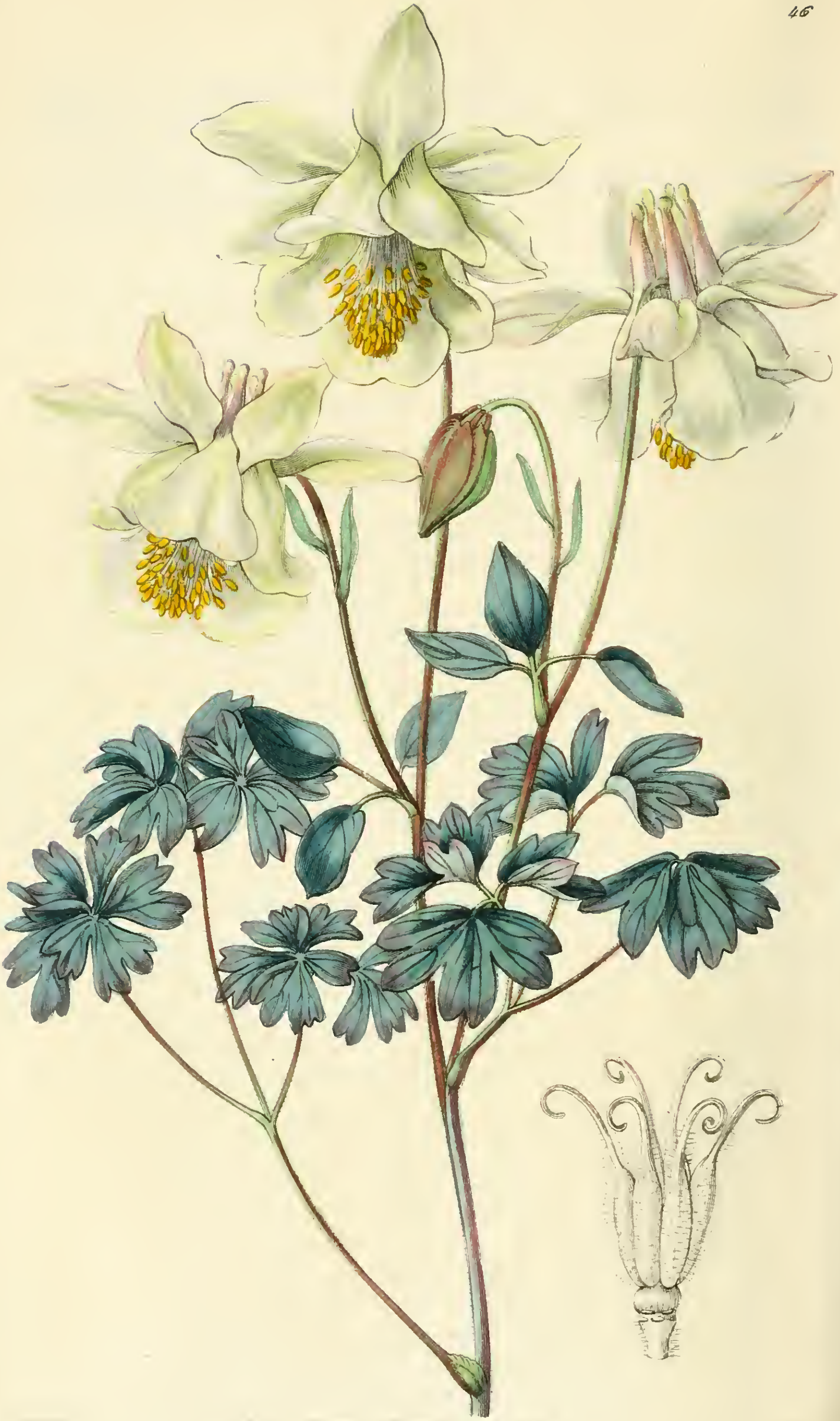
It is very nearly allied to *B. æquinoctialis*, from which it differs in having much narrower leaflets, a distinctly lobed 2-lipped calyx, and a more slender flower whose lobes are deeply divided, and narrower at the base than at the apex.

The name of *B. æquinoctialis* does not occur among the species enumerated by M. DeCandolle in his *Revue de la famille des Bignoniacées*, but we presume it must be retained by him in the genus Bignonia proper, of which it appears that 200 species are known to that learned Botanist. Considering their uniform beauty it is surprising that we should not find them commonly cultivated, and that out of so large a number, inhabiting parts of the tropics constantly visited by Europeans, scarcely any collection can boast of a dozen species.

This is a greenhouse plant of the most easy cultivation, striking readily from layers or cuttings, and growing freely from seeds when they can be procured. It will succeed in almost any soil, but prefers a mixture of loam, peat, and sand, thriving best and seen to the greatest advantage if planted out in the border of the conservatory and trained over a considerable space.

The flowers are produced freely, hanging down and having a very pretty and graceful effect.

46



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AQUILĔGĬĂ glaūcă.

Glaucous Columbine.

POLYANDRIA *PENTAGYNIA.*

Nat. ord. Ranunculaceæ.
AQUILEGIA. Botanical Register, vol. 11. *fol.* 922.

A. *glauca;* perennis, glauca, subpubescens, caule folioso plurifloro, foliolis trifidis cuneatis laciniis bitrilobis superioribus ovatis integerrimis, floribus amplis (flavescentibus odoratis) pilosiusculis, sepalis ovato-lanceolatis acutis, petalorum calcaribus rectis laminâ truncatâ brevioribus, staminibus petalis subæqualibus, ovariis glanduloso-villosis.

Another of the fortunate results of the large and continual importations of seeds from the Himalaya mountains and Cashmere by the East India Company.

It is a fine hardy perennial, growing well in any good garden soil, and requiring the same treatment as the common Columbine. Its stems are from one to two feet high. Its flowers are deliciously sweet and appear in May and June. It may be increased from seeds or by dividing the old plants when in a dormant state.

Probably, as this does not appear among the Columbines enumerated by Drs. Royle and Wallich as found in the North of India, it may be considered by these excellent botanists as a variety of their *A. pubiflora;* but if we are to apply to the genus in India the distinctive characters employed for the species of Europe and Northern Asia, we must regard this as being distinct from it, in the larger and sweet-scented straw-coloured flowers, the nearly smooth stems, the very glaucous leaves, and the shaggy ovaries. It is much more difficult to distinguish from *A. fragrans*, another sweet-scented Indian species, which has however the spurs of the petals hooked inwards, and nothing of the glaucous colour so strikingly conspicuous in the foliage of A. glauca.

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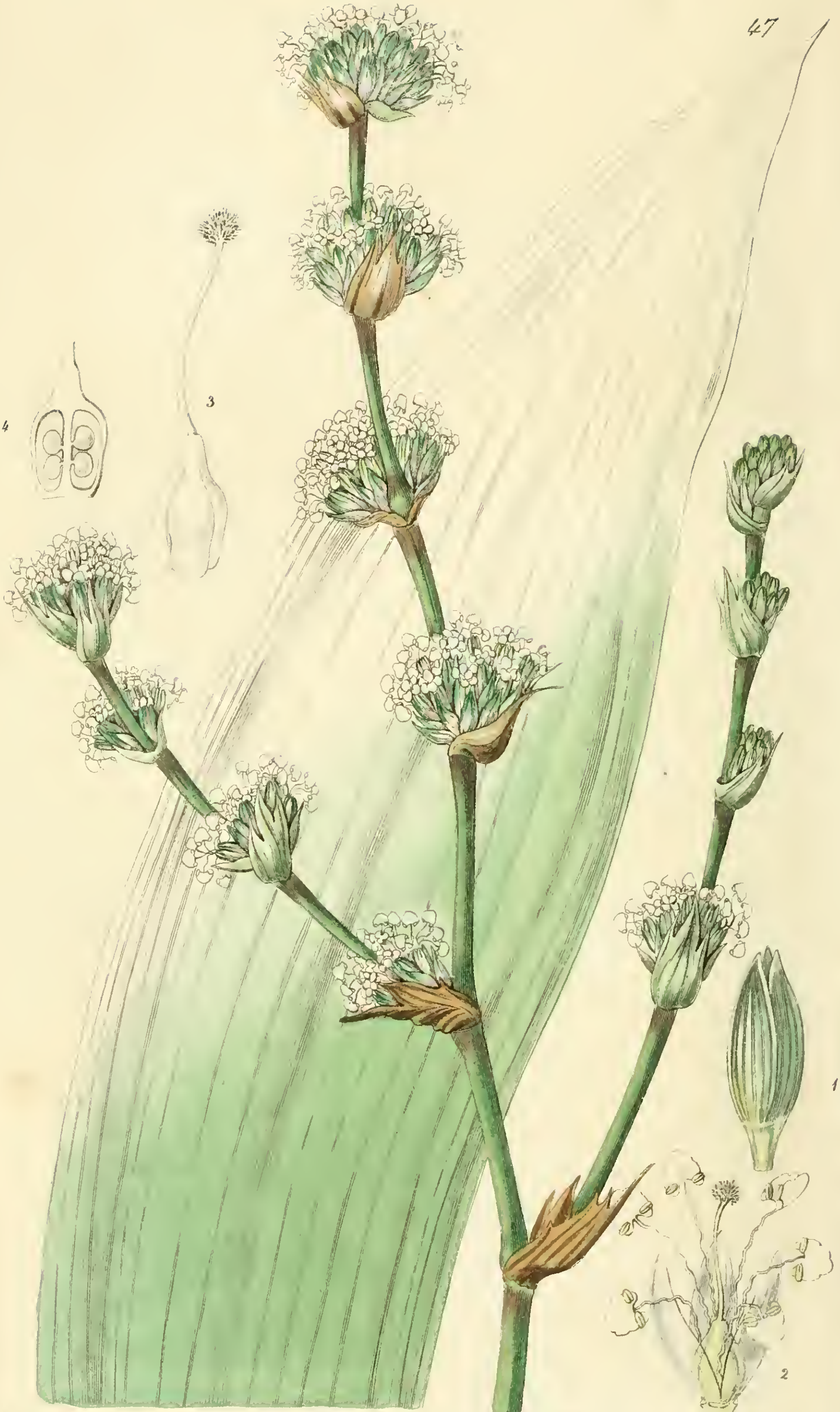

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* SPIRONĒMĂ frāgrāns.

Sweet-scented Spiralthread.

HEXANDRIA *MONOGYNIA.*

Nat. ord. Commelinaceæ.

SPIRONEMA. *Flores* paniculati, nudi, in axillis spatharum fasciculati. *Calyx* 3-phyllus, herbaceus, paleaceus, imbricatus. *Petala* 3, diaphana, paleacea, inclusa. *Stamina* 6, hypogyna, æqualia, filamentis spiralibus, antheris cordatis petaloideis, loculos suos in lobis baseos transversim gerentibus. *Ovarium* 3-loculare, oligospermum ; *ovulis* horizontalibus. *Stylus* simplex ; *stigma* simplex, papillosum.——Herba *Sansevieræ* habitu.

Spironema fragrans. *Supra p.* 26. *misc.*

Herba, *Sansevieræ habitu, glabra, acaulis.* Folia *oblongo-lanceolata, acutissima, lætè viridia, obsoletè nervosa, margine minutissimè scabrida.* Panicula *ramosa, ad nodos spathis membranaceis triquinquedentatis integrisque aristatis subciliatis munita.* Flores *odoratissimi, axillares, subsessiles, glomerati, parvi, bracteis paleaceis involucrati.* Sepala 3, *paleacea, imbricata, striata, virescentia, dorso pilis longis ciliata.* Petala *paulò minora, tenuissima, diaphana, paleæformia, obtusa.* Stamina 6, *æqualia, hypogyna ;* filamentorum *epidermide tenuissimâ laxâ axin e vasis spiralibus constructam spiralem induentibus ;* antheræ *connectivum cordatum, album, obtusum, sublobatum, basi loculos simplices transversos gerens.* Ovarium *ovatum, medio subconstrictum, parcè glandulosum, triloculare*: ovulis *cuique loculo paucis* (4) *horizontalibus sphæricis.* Stylus *filiformis ;* stigma *simplex, papillosum.*

This very curious thing is a native of Mexico, whence it was imported by Messrs. Lowe and Co. By the searcher after show plants it will be despised, for it is not more handsome than a rush ; by the lover of fragrant plants it will be cherished, for its smell is delicious ; and by him who delights in studying the secret workings of nature it will be preserved with the greatest care, because its thin and delicate tissue allows the hidden motion of its fluids and the subtile texture of its fructifying organs to be watched with ease and pleasure.

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* From σπεῖρα a spire and νῆμα a stamen, in allusion to the spiral threads that occupy the interior of the filaments.

August, 1840.

It is more especially in the stamens that its structure is singular; of these the skin of the filament is excessively thin and hardly adheres to that below it, and it encloses a bundle of spiral vessels too long for the sheath of skin, so that while the latter is straight and even, the former are forced into a spiral direction from want of room to straighten; the lobes of the anther too are placed transversely across the lobes of a heartshaped membranous connective, which is generally itself more or less lobed.

It may be considered that this genus shows more distinctly than any previously discovered, the transition from the Commelynaceous order into the Xyridaceous and those others to which the name glumaceous is often applied.

A greenhouse herbaceous plant of the easiest cultivation.

Fig. 1. represents a calyx; 2. a corolla with the stamens and pistil; 3. a pistil; 4. a vertical section of the ovary.

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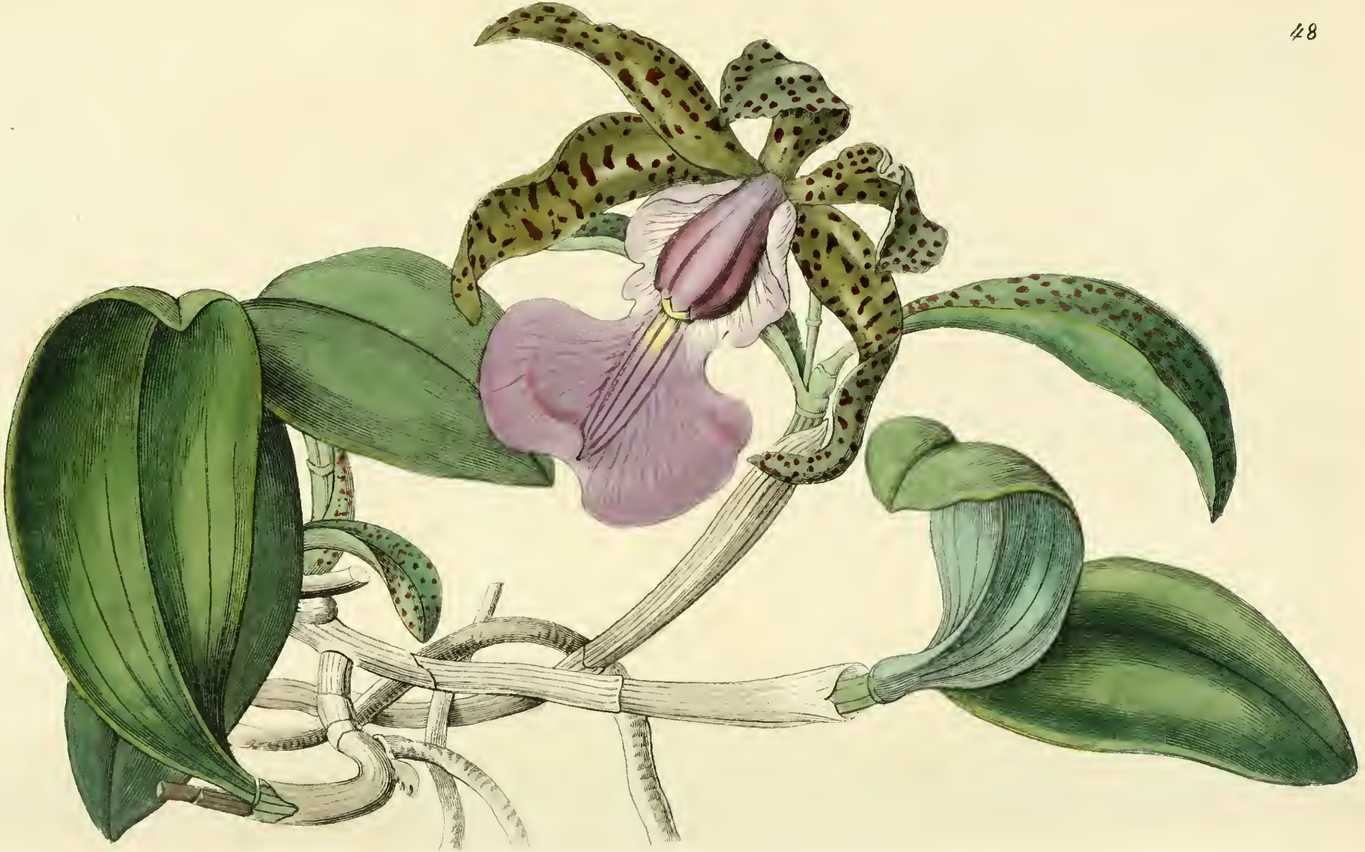

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CĀTTLĔYĂ Aclāndiæ̆.

Lady Acland's Cattleya.

GYNANDRIA *MONANDRIA.*

Nat. Ord. Orchidaceæ § Epidendreæ.
CATTLEYA. Botanical Register, vol. 12. *fol.* 927.

§. 2. *Labelli lobis lateralibus abbreviatis, columnam haud supertegentibus.*

C. *Aclandiæ;* foliis oblongis, floribus subsolitariis, sepalis petalisque herbaceis lanceolatis æqualibus incurvis maculatis, labelli plani calvi hypochilio dilatato patulo subrepando epichilio orbiculari reniformi emarginato.

Of this very distinct and pretty species of the handsomest of all the genera of Orchidaceæ I have only seen a single flower, which I owe to the kindness of Lady Acland of Killerton, by whom the drawing, from which the annexed figure was prepared, was also supplied.

It was received from Brazil in October, 1839, having been discovered by Lieut. James of H. M. ship Spey, and flowered in the stove at Killerton in the month of July, 1840, under the able management of Mr. Craggs, Sir Thomas Acland's gardener.

It is probable that the plant, when in a more vigorous state, will produce several flowers of a larger size, in a cluster; even in the present state the large purple lip and column render it very handsome.

Together with *Cattleya bicolor* it forms a distinct section of the genus, distinguished by the base of the lip being too narrow, and too spreading, to cover over the column.

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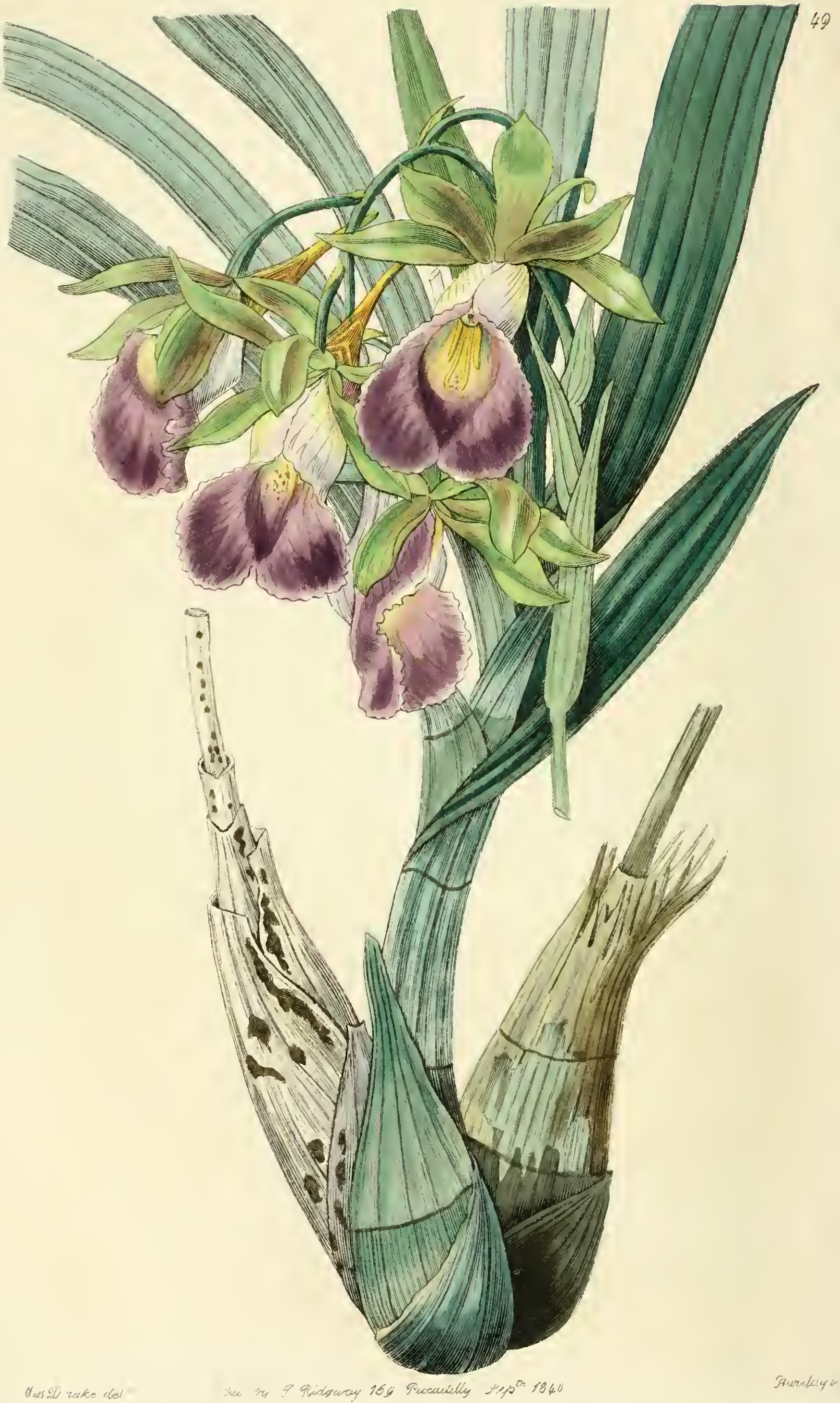

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* GALEĀNDRA Bāuĕrī.

Bauer's Casquewort.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDACEÆ, § VANDEÆ.

GALEANDRA. Illustr. of Orch. Pl. gen. t. 8. *Gen. & Sp. Orch. p.* 186.

Perianthium patens v. connivens, *sepalis petalisque* æqualibus ascendentibus, liberis. *Labellum* infundibuliforme, calcaratum, indivisum, sessile, intùs læve, margine nunc fimbriato. *Columna* erecta, membranaceo-alata, clinandrio declivi. *Anthera* galeæformis, cristâ recurvâ cum dorso clinandrii cardinatâ. *Pollinia* 2, posticè excavata, caudiculâ brevi, cum glandulâ elongatâ basi divergenti-bilobâ articulatâ.——Herbæ *terrestres,* foliis *plicatis,* scapis *radicalibus* v. *racemis terminalibus.*

G. *Baueri.* (G. & Sp. Orch. 186.) caule simplici, foliis lanceolatis 3-nerviis, corymbo terminali pedunculato nutante foliis breviore, pedunculo squamis lineari-lanceolatis membranaceis vaginato, sepalis petalisque lineari-oblongis acutiusculis, labello maximo antico emarginato apiculato crenulato, calcare ovario æquali.

G. Baueri. *Bateman Orch. Mex. & Guat. t.* 19.

This plant was originally discovered in French Guiana by Martin, among whose dried plants it was found when they were purchased by Mr. Lambert and others. A drawing was subsequently made from it by Mr. Francis Bauer, the details of which were published in the *Illustrations of Orchidaceous plants;* and from those materials exclusively the species was adopted in the *Genera and Species of Orchidaceæ.* Subsequently the identical specimen from which Mr. Bauer's drawing was made was given by Mr. Lambert to Mr. N. B. Ward, who most liberally added it to my herbarium. At last a Mexican plant was received by Mr. Barker, from his collector Mr. Ross, who met with it at a place called "Kisatipa, ten leagues from Melacatapec, and growing at the upper end of a dry ravine, terminating half way up the mountains, in a south-west aspect. The temperature varying from 69° to 77° Fahr. by day, and at night as low as 59°. The mountain surrounding this ravine, that is on the north-east side, is covered with a great variety of Orchideæ, whilst on the south side of the ravine there are none to be found but a few Tillandsias. On the top of the mountain there is a continual mist all the year, from December to February excepted. The atmosphere is particularly moist and warm." From this plant the accompanying drawing was made, and it is a faithful likeness.

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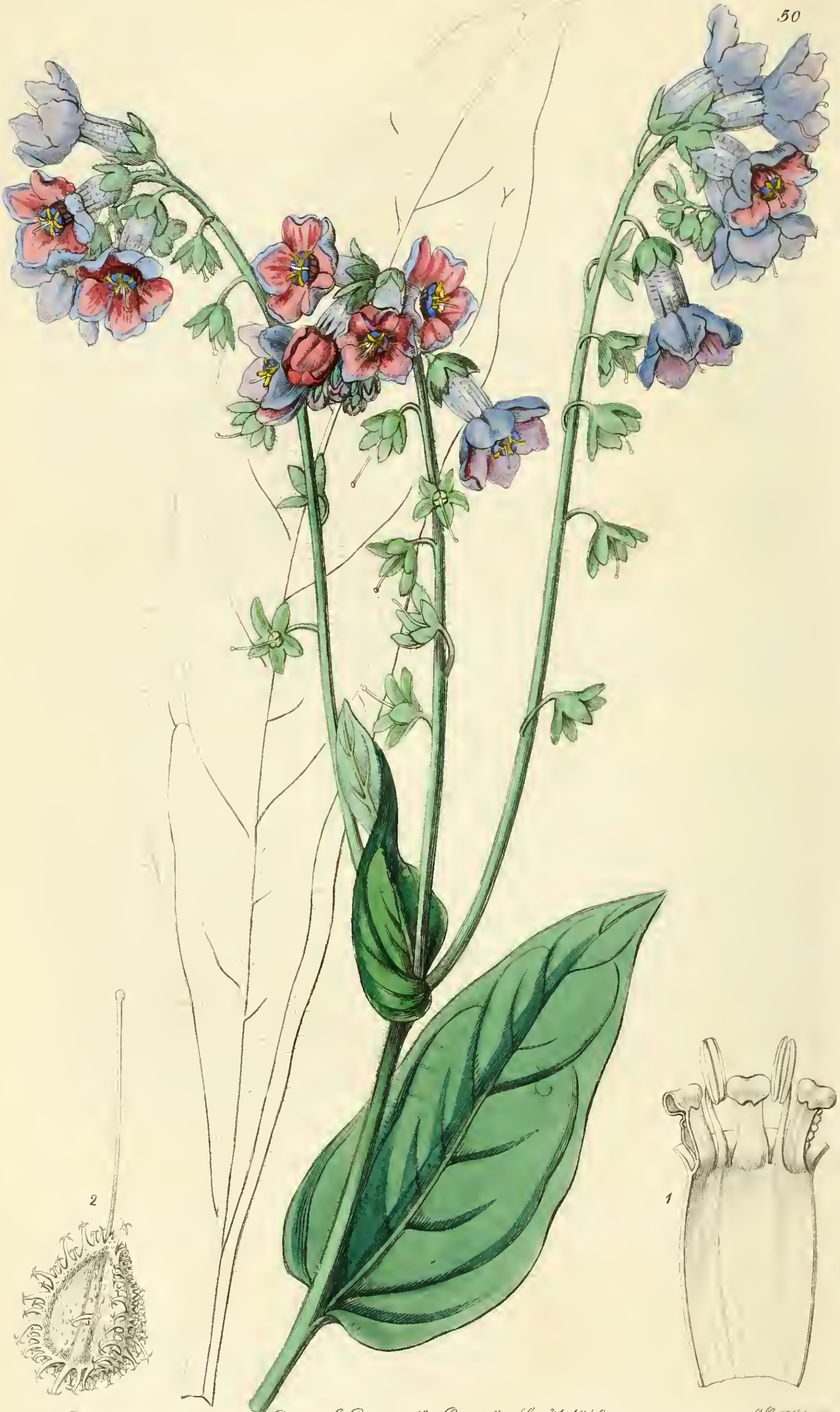
* From *galea,* a casque, and ανηρ an anther; in allusion to the crested anther. At first sight this would seem to be a hybrid name, being constructed of two words belonging to different languages; but as galea itself is from the Greek γαλῆ, I hope critics will consider the name allowable.

The same plant has subsequently reached the Horticultural Society through Mr. Hartweg; but the flowers it produced were of a much more dull colour than those of Mr. Barker. That all the specimens now adverted to are identical I am certain; so that the plant ranges over an unusual extent of country, the South of Mexico on the one hand, and French Guiana on the other, being its northern and southern limits. It is at present excessively rare in gardens.

In the garden of the Horticultural Society it is treated in the same manner as Catasetums and plants of that kind. It is grown in a well-drained pot, has plenty of water when forming its leaves and flowers, and when that period has passed by, is allowed gradually to dry up and winter itself. It is found by this treatment to push with more vigour the next year than if it is kept in a continual state of excitement. Another plant now to be found in several collections, and called Galeandra Baueri, but which is much more branched, and has not yet flowered, certainly grows better when fixed to a block of wood than when grown in a pot.



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CYNOGLŌSSŪM longiflōrūm.

Long-flowered Hounds-tongue.

PENTANDRIA *MONOGYNIA.*

Nat. Ord. BORAGINACEÆ.
CYNOGLOSSUM. *Botanical Register,* 1839. *fol.* 36.

C. *longiflorum* (Royle mss.); pilosum, foliis oblongis acuminatis superioribus basi cordato-amplexicaulibus, racemis ebracteatis, calycis laciniis tubo corollæ duplò brevioribus, nucibus marginatis: aculeis uniserialibus paucisque sparsis. *Bentham in Royle's Illustr. p.* 305.

Of this fine species of Hounds-tongue the characteristic marks are derived in part from the great length of the tube of the corolla, and in part from the elongation of the processes which rise up from the mouth of the corolla, and alternate with the stamens. They are as long as the projecting filaments, curved inwards and emarginate at the apex, and hollow, which latter circumstance renders it probable that they are mere folds of the corolla and not abortive stamina.

According to Brown (*Prodr. p.* 495) the species with projecting stamens are to be excluded from the genus; and if so, this plant is not a Cynoglossum. But the fruit is that of the latter genus, not of Anchusa, to which I presume the species must otherwise be referred.

This is a very pretty hardy perennial, growing about a foot and a half high, if planted in any good garden soil, and flowering freely from the end of May to the beginning of August.

It is increased by seeds or divisions of the roots; but by seeds is the best way, as they are produced abundantly; however the plants so raised will not flower before the second season after sowing.

It was raised from seeds received from the Honourable East India Company, through Dr. Royle, in May, 1839, and collected in Cashmere; it stood out last winter in the open border without any protection.

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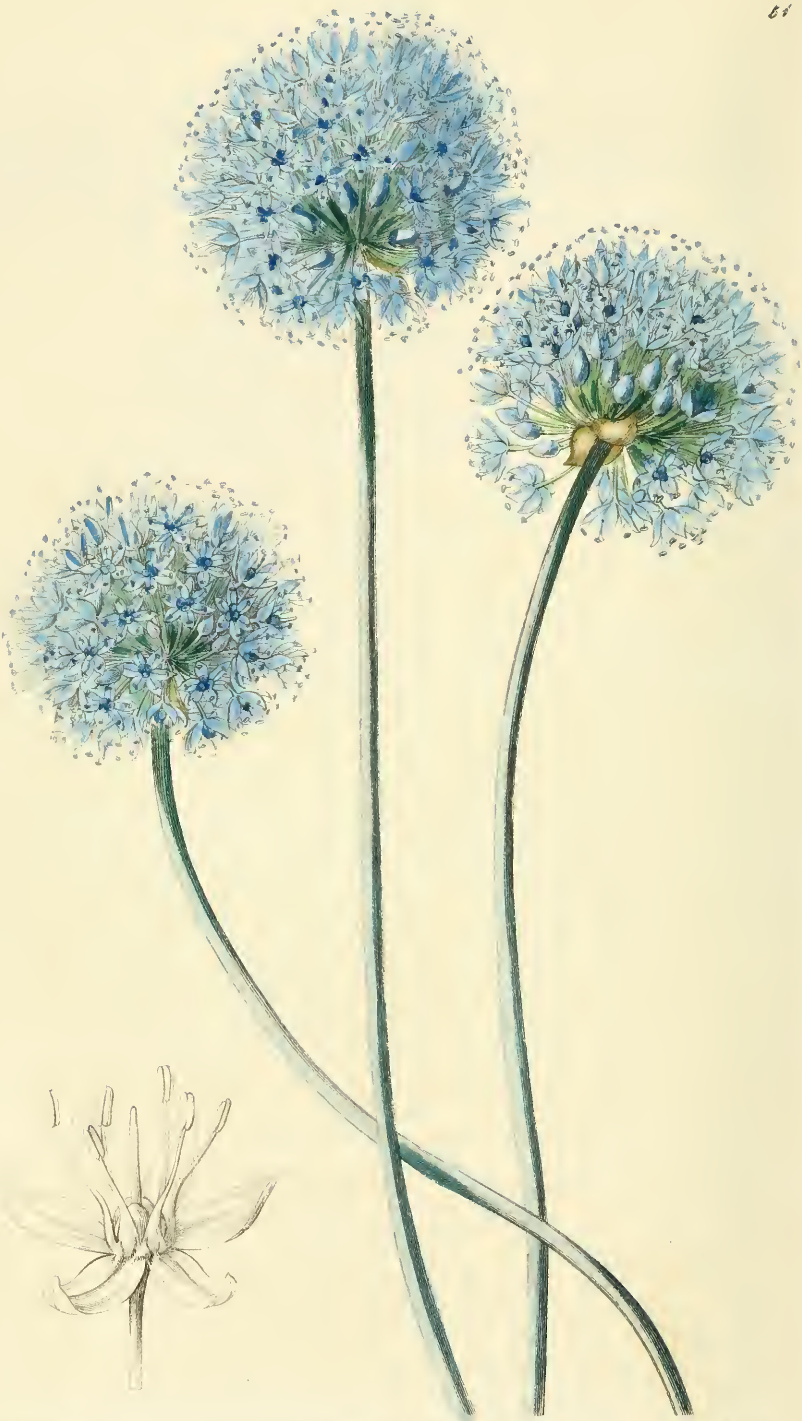

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ĀLLĬŪM cœrŭlĕūm.

Blue Leek.

HEXANDRIA *MONOGYNIA.*

Nat. ord. Liliaceæ.

ALLIUM. Botanical Register, vol. 9. *fol.* 758.

A. *cœruleum ;* foliis linearibus triquetris, scapo tereti, umbellis globosis spathâ multò longioribus, perianthii laciniis acutis filamenta simplicia æqualia subulata æquantibus.

A. cœruleum. *Pallas. it.* 2. 737. *t. R. Link & Otto abbild. p.* 39. *t.* 20.

A. azureum. *Ledeb. ic. pl. fl. rossic. alt. illustr. t.* 136. *fl. altaic.* 2. 14.

A. cœrulescens. *G. Don monogr. all. p.* 34. *Römer & Schultes syst. veg.* 7. 1032.

Originally found by Pallas in abundance upon the salt plains of Asiatic Russia, near the Irtisch river; afterwards by Ledebour on the Altai mountains, near the fortress of Buchtarminsk, flowering in May and June.

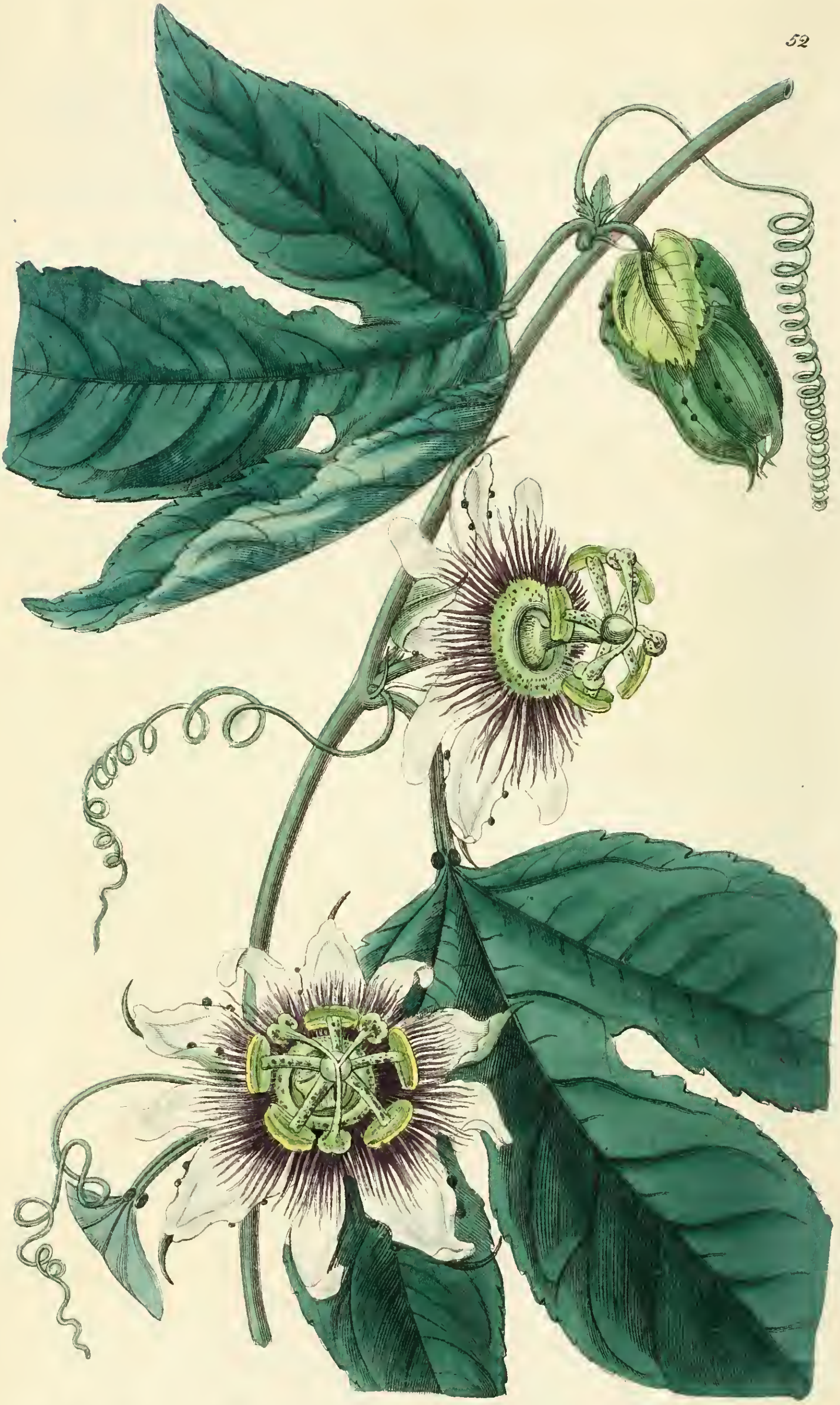
Although its colour varies in intensity, sometimes being a little paler, and sometimes much darker than in the annexed figure, yet the flowers are always bright blue. Why therefore Mr. George Don thought it desirable to substitute for Pallas' very good name *cœruleum* his own very bad one of *cœrulescens,* it is not easy to conjecture.

Dr. Wallich's *A. cœruleum,* from Nepal and Kemaon, which I presume is the same as the Himalayan plant, so called by Dr. Royle, is a different species.

In gardens this is a pretty bulbous plant, quite hardy, growing about eighteen inches high in any rich soil, and flowering about the end of June. It may be increased freely, either by seeds or by offsets from the old roots. The seeds, like those of all bulbous plants, should be sown when ripe in pans, and should not be disturbed before the second season after sowing, during which time they require no care except watering during the growing season, keeping free from weeds and from the attacks of slugs.

It was raised from seeds received by the Horticultural Society from Dr. Fischer in 1834.

The species is a Leek, not an Onion; that is to say, the leaves are flat like the first, and not round like the second.



Miss Drake del. Pub by J. Ridgway 169 Picc'y Sep 1 1840 G Barclay sc

PASSIFLŌRĂ verrŭcĭfĕră.

Warted Passion-flower.

MONADELPHIA *PENTANDRIA.*

Nat. ord. PASSIFLORACEÆ.

PASSIFLORA. Botanical Register, vol. 1. *fol.* 13.

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§ Granadilla. *DeCand. Prodr.* 3. 327.

Involucrum sub flore 3-phyllum; foliolis integris dentatisve non laciniatis. Calyx 5-*lobus. Petala* 5. *Pedicelli* 1-*flori et cirrhi simplices ex iisdem axillis.*

* Foliis lobatis tripartitis sectisve.

P. *verrucifera;* foliis glabris trilobis serratis basi obtusis cuneatisque, petiolis apice biglandulosis pedunculis duplò longioribus, bracteis ovatis acuminatis serratis sepalisque margine glandulis verruciformibus obsitis, coronæ radiis subulatis petalis brevioribus. *Supra misc. no.* 105.

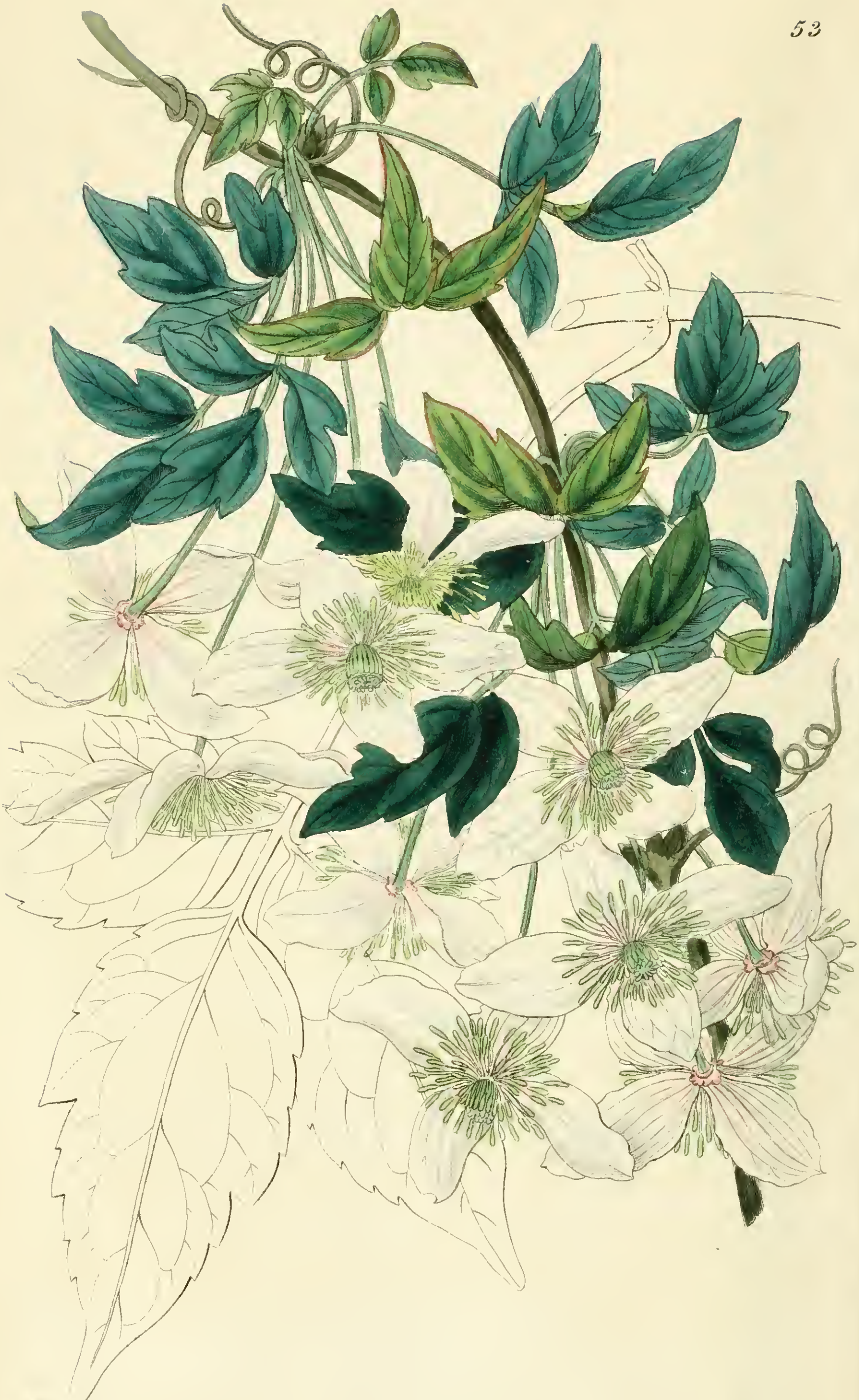
Caulis *glaber.* Stipulæ *setaceæ, pedunculo ferè æquales.* Sepala *intus alba, petalis albis duplò latiora.* Coronæ *radii atropurpurei, biseriati, æquales;* annulus supremus *integerrimus, planus, tuberculis paucis purpureis infra marginem;* intermedius *erectus, crenulatus;* columnaris *pentagonus.* Ovarium *sub lente minutissimè sericeum.*

A greenhouse climber, bought by Mr. Harris of Kingsbury from Colville's nursery, but without any information of its native country. It is however in all probability Brazil, where are other nearly allied species.

Its affinity is evidently with *P. incarnata* and *edulis*, from both which it is clearly distinguished by the singular production of green warts upon the margin, not only of the bracts but of the sepals. Like all its genus its flowers are very curious and pretty; but its want of rich colours renders it far inferior to many species now cultivated.

It is a greenhouse climber, of as easy cultivation as the common *Passiflora edulis*, and will grow with the greatest luxuriance if planted in the border of the conservatory. The soil which suits it best is rich loam mixed with peat and sand. It can be multiplied freely by cuttings.

53



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CLĒMĂTĬS montānă.

Mountain Clematis.

POLYANDRIA *POLYGYNIA.*

Nat. ord. RANUNCULACEÆ.

CLEMATIS. Botanical Register, vol. 23. *fol.* 1955.

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§ 1. Flammula.

Involucrum 0. *Petala* 0. *Carpellorum caudæ longæ, barbato-plumosæ. Embryonis in semine cotyledones distantes.*

C. *montana;* pedunculis 1-floris, involucro nullo, foliis ternati-sectis segmentis oblongis acuminatis subtrifidis grossè serratis. *DeCand. syst.* 1. 164. *prodr.* 1. 9.

C. anemoniflora. *Don Prodr. fl. nep.* 192. fide Royle.

According to Dr. Royle, *Clematis grata* from its fragrance, and *C. montana* from the showy nature of its garlands of numerous white rose-like flowers, are the most desirable of the Himalayan species of this charming genus as ornamental plants. Certainly nothing can well be more beautiful than the latter, of which a figure is now given; for in the month of May, or even in April, on the south coast of England, it is one mass of the most brilliant snow-white blossoms tinged with a delicate pink.

It is a species of the *Flammula* section, and not at all related to that called *Cheiropsis,* in which by some mistake it was stationed by DeCandolle.

It is a hardy climber, flowering in May, and requiring the same treatment as the other hardy kinds of Clematis.

It strikes freely from cuttings of the half-ripe wood, and grows very rapidly if planted in any strong rich soil. It is therefore well adapted for covering arbours, the flowers being sweet scented and produced earlier than any of the other hardy species.

It was first brought from India by Lady Amherst, and distributed under the name of *Clematis odorata*, a name it still retains in some collections. The accompanying drawing was made in the Garden of the Horticultural Society in May last.

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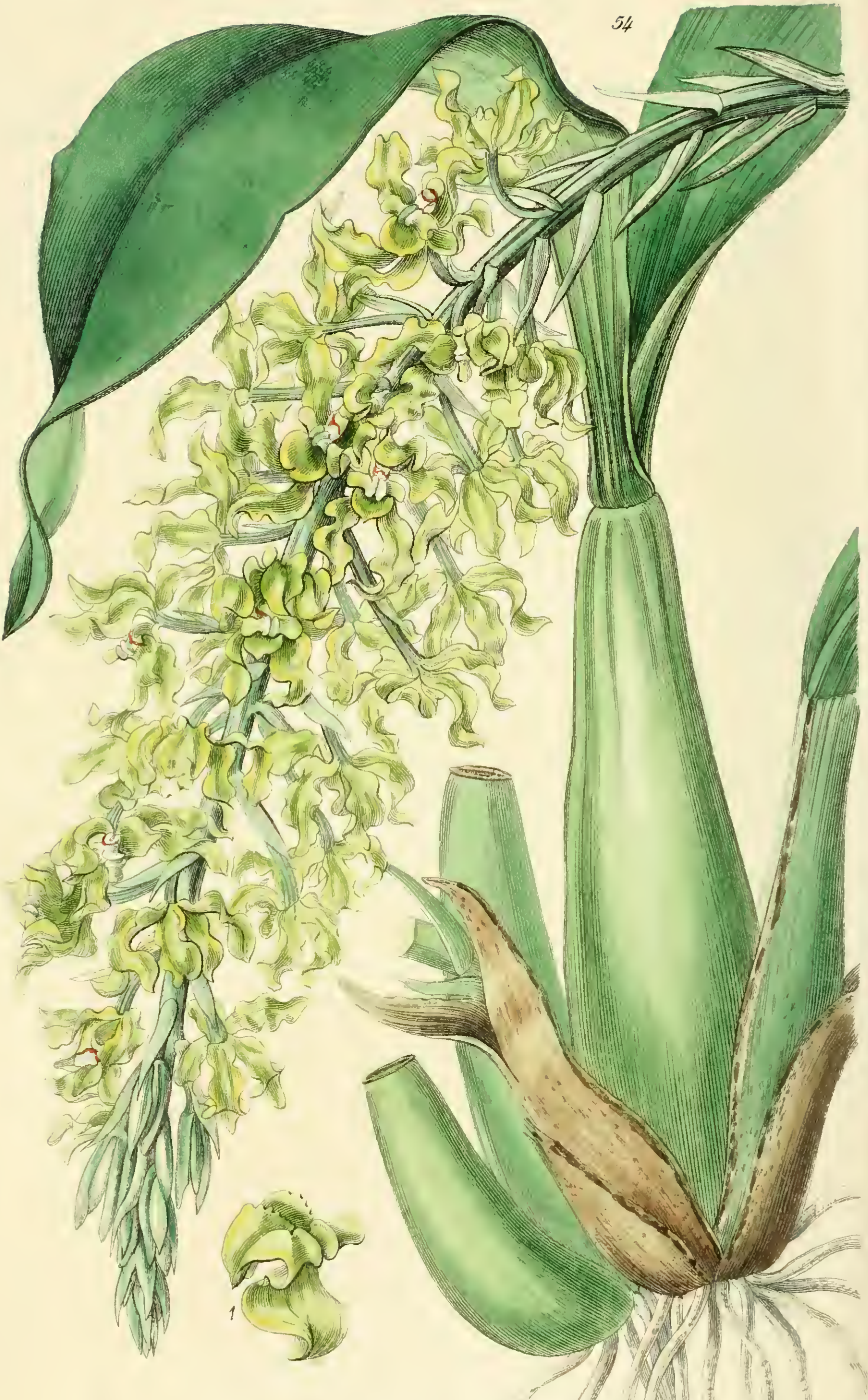

Miss Drake del. [illegible] by J. Ridgway, May 1st [illegible] Piccadilly [illegible] Barclay

RODRIGUĔZĬĂ crīspă.

Crisped Sweet-scented Rodriguezia.

GYNANDRIA *MONANDRIA.*

Nat. Ord. ORCHIDACEÆ § VANDEÆ.

RODRIGUEZIA. Botanical Register, vol. 11. *fol.* 930.

R. *crispa ;* pseudobulbis ovatis elongatis compressis diphyllis, foliis oblongo-lanceolatis patentibus undulatis, racemo elongato denso pyramidato nutante, sepalis omnibus liberis petalisque undulato-crispis, labello sigmoideo lanceolato bicristato appendice ungue multò breviore.

R. crispa. *Bot. Reg.* 1839, *misc. no.* 139.

One of the sweetest plants I know ; its fragrance resembling that of Primroses. It is an Orchidaceous plant from the Organ mountains of Brazil, and flowered with Messrs. Loddiges in October, 1839. Its singularly crisped flowers, of a dull sea-green, bordered with yellow, have an uncommon appearance.

It is evidently very near *R. suaveolens,* the *Pleurothallis foliosa* of the Botanical Magazine, t. 2746, a plant I have never seen. But according to the figure and description the two lateral sepals of that species are united at the base, and the flowers are very little crisped.

It is one of those plants which succeed either in a well drained pot, or suspended in the air of the stove upon a block of wood, as it suits the fancy or convenience of the cultivator. It should never be kept so dry as Catasetums, or plants with thick and fleshy pseudo-bulbs. It is easily propagated by division, the front bulbs making the best plants.

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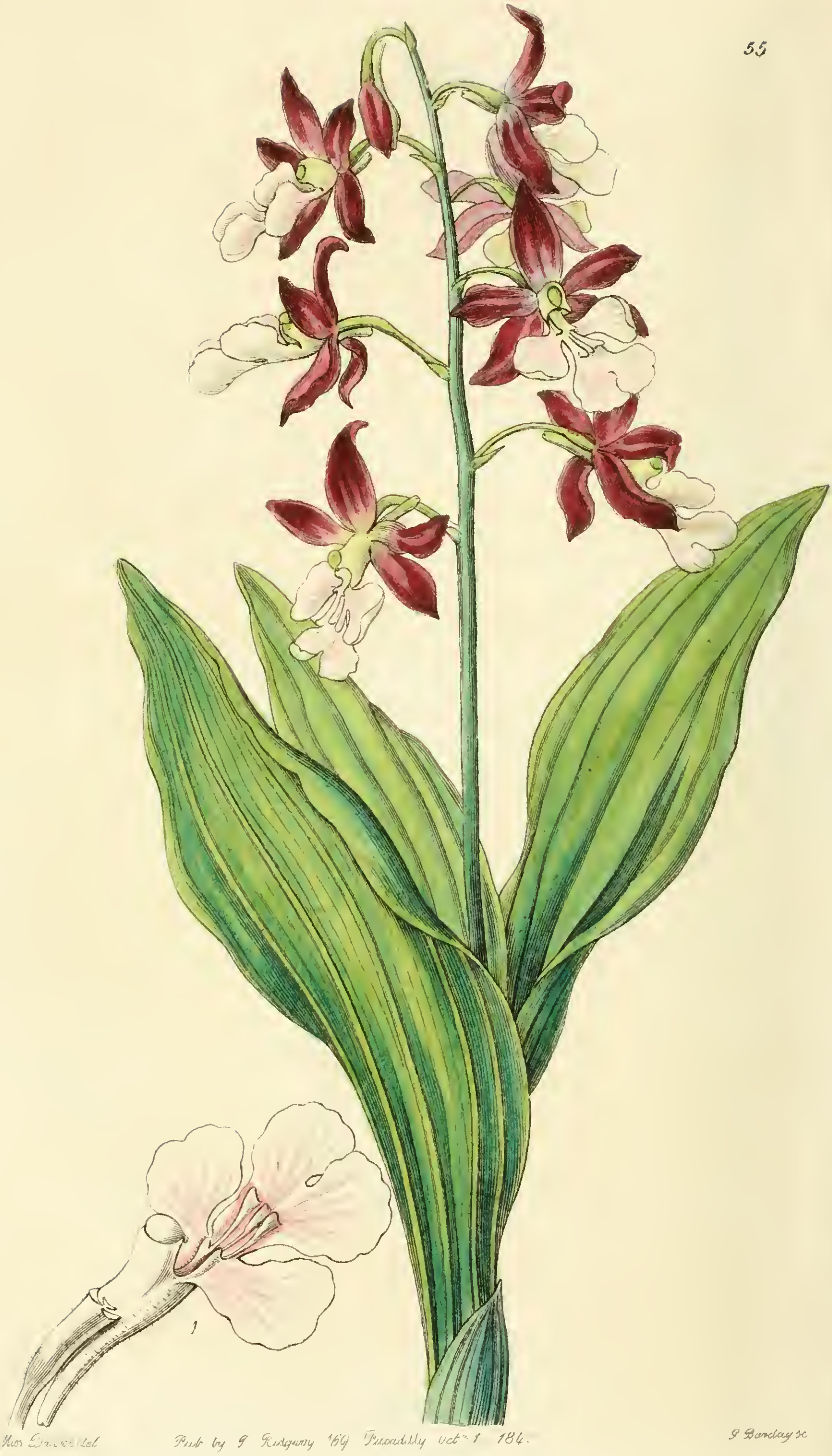

Miss Drake del Pub by J Ridgway 169 Piccadilly Oct.r 1 184. J Barclay sc

CALĀNTHĒ dĭscŏlŏr.

Discoloured Fairbloom.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDACEÆ, § VANDEÆ.

CALANTHE. Botanical Register, vol. vii. *fol.* 571.

C. *discolor;* racemo laxo pubescente, sepalis petalisque acutis, labelli trilobi columnæ omninò accreti basi pubescentis bilamellati lobo intermedio bilobo 3-carinato, calcare pubescente acuto limbo breviore. *Sertum Orchidaceum, sub. t.* 9. *Bot. Reg. misc.* 1838. *no.* 32.

Folia *oblonga, venis tribus majoribus, cæterisque minoribus interjectis, scapo elongato racemoso multifloro breviora.* Scapus *palmaris ad sesquipedalem floribus* 8-20. Sepala *et* petala *vinoso-purpurea;* labellum *album subroseum.*

This very pretty species was first communicated to me by M. Auguste Mechelinck of Ghent, who had flowered it and *C. bicolor.* It was subsequently sent to this country, and has now blossomed in several places; no where however with more beauty than with Mr. Bateman, whose specimen was a foot and half high. Its rich wine-red sepals and petals form so good a back-ground for the white lip, which they so much relieve, that this species is to be regarded as one of the handsomer species of the genus, and is certainly much more worth cultivating than *C. veratrifolia, furcata,* or *densiflora,* which have whole-coloured blossoms.

I am unacquainted with the native country of this species; but as it comes to us through the Dutch, it is probably either Japan or Java, and most likely the former country.

In general the species of the genus Calanthe require to be cultivated in the stove or orchidaceous house. It consists of plants which appear to derive a considerable quantity of nourishment from the soil in which they grow; and the species should therefore be planted in pots in preference to being suspended in the atmosphere of the stove. Their soil should consist of good brown peat, and the pots must be well drained. Whether or not there is any thing specially requisite in the management of this species I am not informed.

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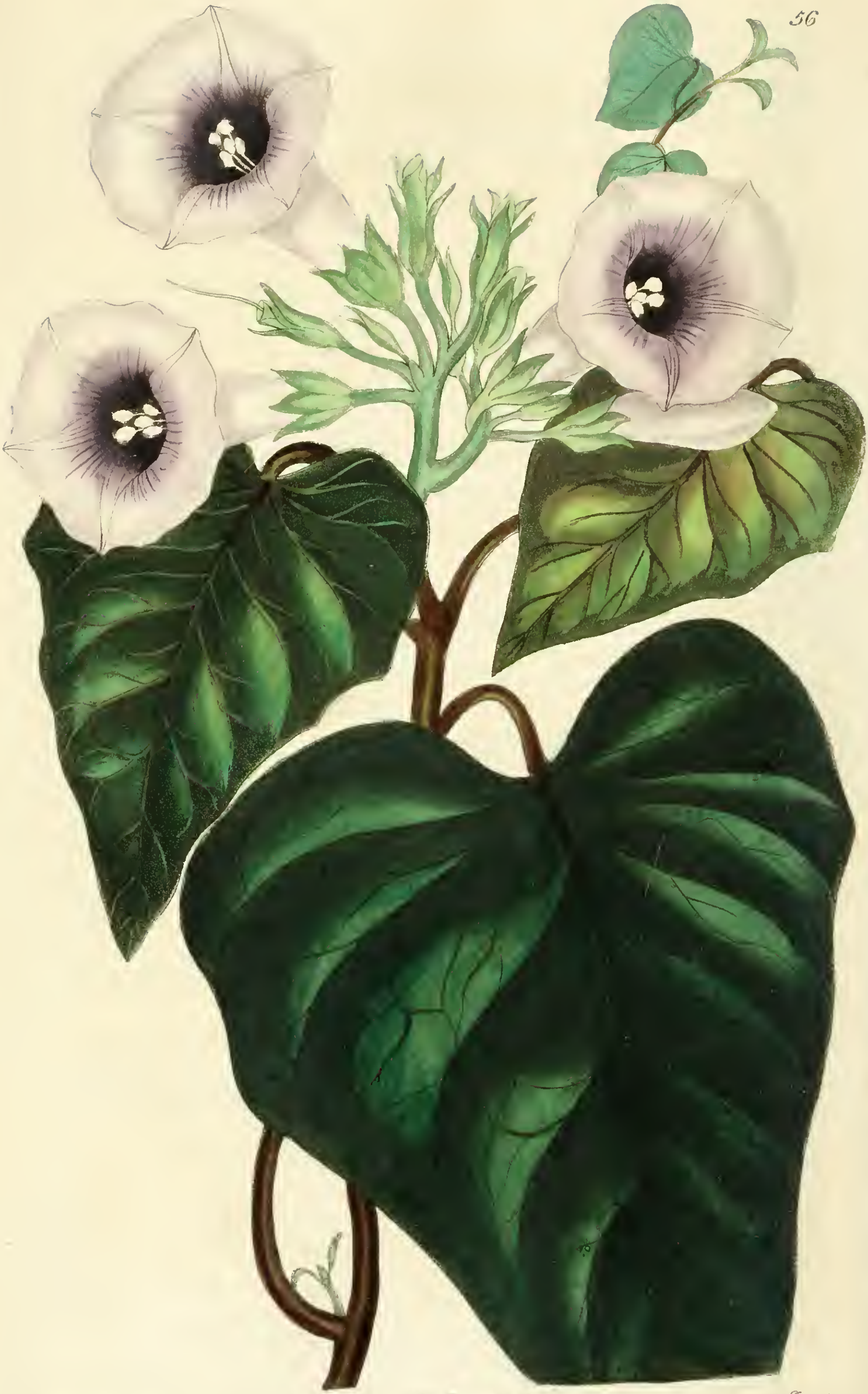

Pub by J. Ridgway 169 Piccadilly Oct 1 1840

G. Barclay sc

* BATĀTĀS betācĕă.

Beet-rooted Sweet Potatoe.

PENTANDRIA *MONOGYNIA.*

Nat. Ord. CONVOLVULACEÆ.

BATATAS. *Sepala* 5. *Corolla* campanulata. *Stamina* inclusa. *Stylus* 1. *Stigma* capitatum, bilobum. *Ovarium* 4-loculare, loculis monospermis. *Capsula* 4-locularis, aut abortu 3-locularis.——Herbæ *nunc repentes, nunc volubiles.* Choisy conv. or. p. 52.

B. *betacea;* foliis ovatis cordatis angulatis et subquinquelobis acutis, racemo contracto composito, sepalis acuminatis, tubo corollæ limbo circulari longiore, radice fusiformi sanguineâ. *Bot. Reg.* 1839. *misc.* 152.

Until the confusion that exists among the species of Convolvulaceous plants shall have been cleared up by the publication of the labours of M. Choisy in DeCandolle's Prodromus, it is impracticable to say whether a given tropical species is new or not. I am therefore by no means able to affirm that such is the case in the present instance; a diligent search however has not enabled me to discover any record of it, and at all events it is new to our gardens.

As has already been stated at No. 152 of the miscellaneous matter of the Botanical Register for 1839, the plant is a native of Demerara: and according to Mr. May, of the Ripon Nursery, who first had it for sale, it is a stove plant, with sufficient hardiness to succeed in a good greenhouse; which, considering the habits of such plants, is probable; but it is doubtful whether it will flower well without high heat.

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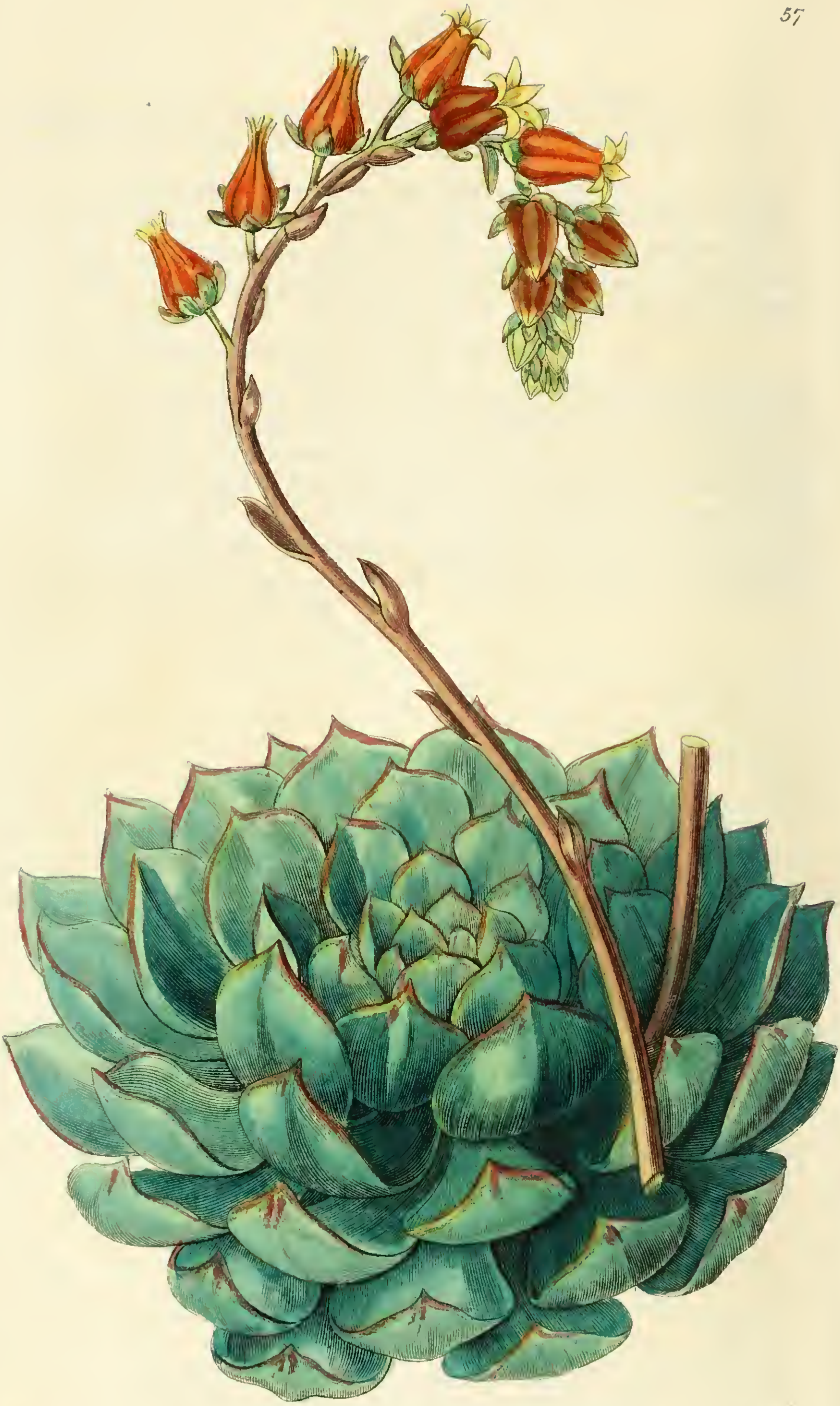
* To the language of what American nation this word is to be assigned, does not seem clearly ascertained; that it is American seems however certain, for it has no designation among the natives of Asia; the Malay names mentioned by Rumphius being clearly exotic to those countries. According to Piso and Marcgraaf the Portuguese of Brazil, in their day, called the Sweet Potatoe Batata, but the natives had a different name. Whether or not Hernandez throws any light upon the subject I have not the means of ascertaining, as there is no copy of his book within reach just now.

The peculiar colour of its flowers renders it strikingly different from *Ipomœa scabra*, *Horsfalliæ*, *tyrianthina*, *rubro-cœrulea*, or any of the other showy species now commonly in cultivation; and its roots, which are said to be like red beet, form a singular part of its character. Such a variety of the Sweet Potato is mentioned by Marcgraaf.

The whole genus *Batatas* seems to have large fleshy roots; the *B. edulis*, which is the common eatable Sweet Potato, the *B. paniculata*, which has large turnip-shaped roots that yield a kind of Jalap, and the present plant, are apparently mere types of the prevalent character of the genus, which has been struck off Ipomœa by M. Choisy, principally on account of the ovary being 4-celled, with one seed in each cell, instead of 2-celled, with 2 seeds in each cell.

57



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* ECHEVĔRĬĂ secūndă.

One-sided Echeveria.

DECANDRIA *PENTAGYNIA.*

Nat. ord. CRASSULACEÆ.

ECHEVERIA. Botanical Register, vol. 15. *t.* 1247.

E. *secunda ;* foliis rosulato-confertis cuneatis mucronatis pinguibus glaucis, racemo secundo recurvo, floribus longè pedunculatis. *Bot. Reg.* 1839. *misc.* 112.

So full an account has been given by Mr. Booth of this plant at no. 112 of the miscellaneous notices of the Botanical Register for 1839, that little remains to be added.

It has now been cultivated for some time in the garden of the Horticultural Society, where it was received from Sir Charles Lemon, Bart. and it proves a very beautiful greenhouse plant, of the easiest management, remaining in flower during many weeks in the summer. It would doubtless succeed perfectly well in a sitting room, with Aloes, Stapelias, and such plants ; only it is necessary that it should be fully exposed to the hottest sun for as long a period of the summer as possible, otherwise it will become *drawn*, and its colours will want brightness.

Care too must be taken that the pot in which it is placed is thoroughly drained of superfluous moisture, by means of a deep layer of broken pottery ; for it is more liable to suffer from damp than from drought.

From its sides below the leaves there spring many young branches, or suckers, as in the common Houseleek, and by those it is freely multiplied, each sucker forming a plant if potted in silver sand.

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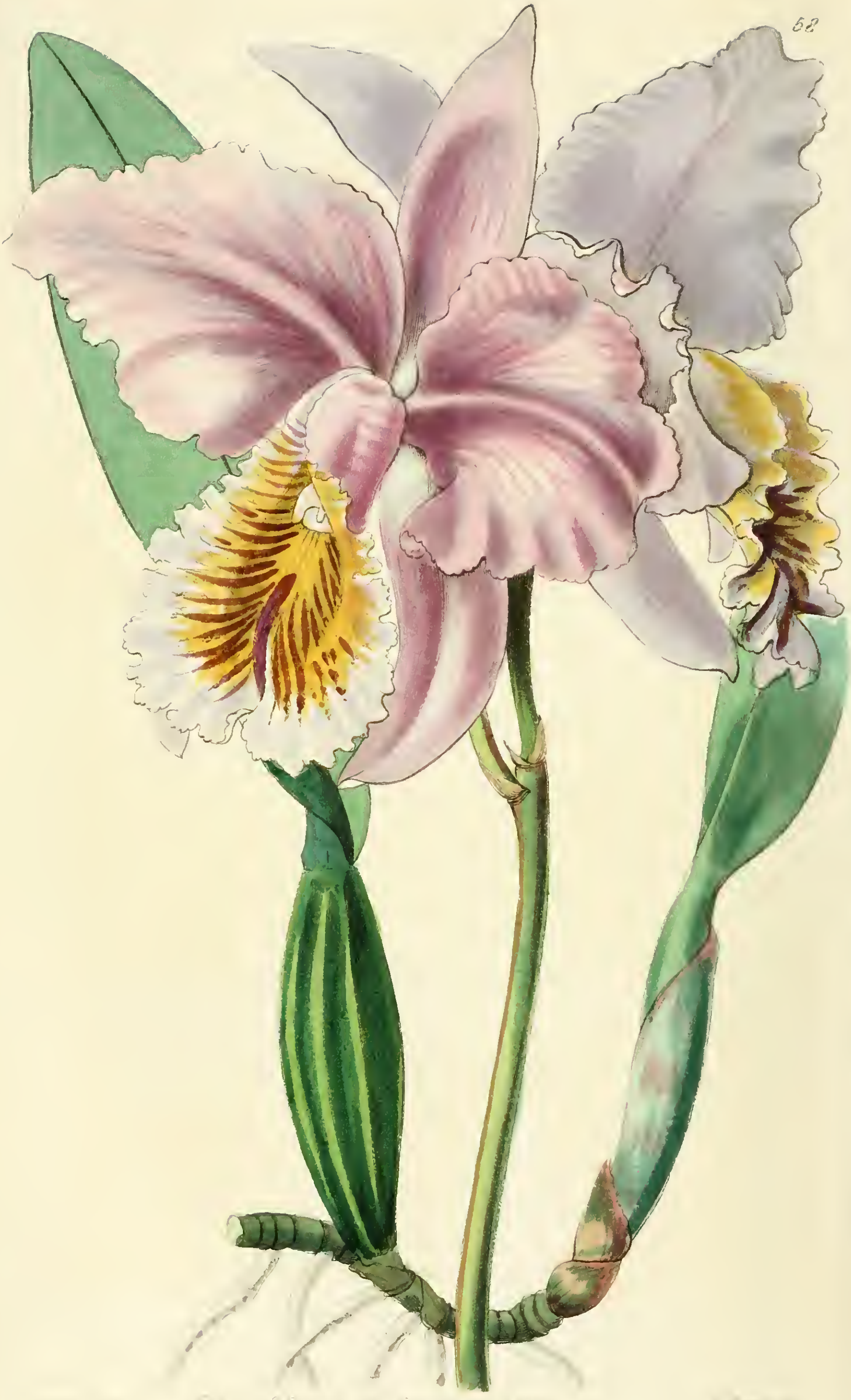
* See folio 1247.

Now that communications with Mexico are so frequent, we ought to expect many more species of this genus, all of which are worth the cultivator's care. *E. coccinea*, with a leafy spike of scarlet flowers, yellow inside; *E. teretifolia*, whose flowers are of the same colour, but whose leaves are tapering, still remain to be introduced; and even the old *E. cæspitosa*, with the habit of the species now figured, but with yellow stalkless flowers, is seldom or never seen, although cultivated years ago. In addition to these there are several species not yet described, to which, from the general beauty of the genus, some importance is to be attached.

58



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CĀTTLĔYĂ labiātă; *var.* Mōssĭǣ.

Mrs. Moss's Cattleya.

GYNANDRIA *MONANDRIA.*

Nat. Ord. ORCHIDACEÆ § EPIDENDREÆ.
CATTLEYA. Botanical Register, vol. xi. *fol.* 953.

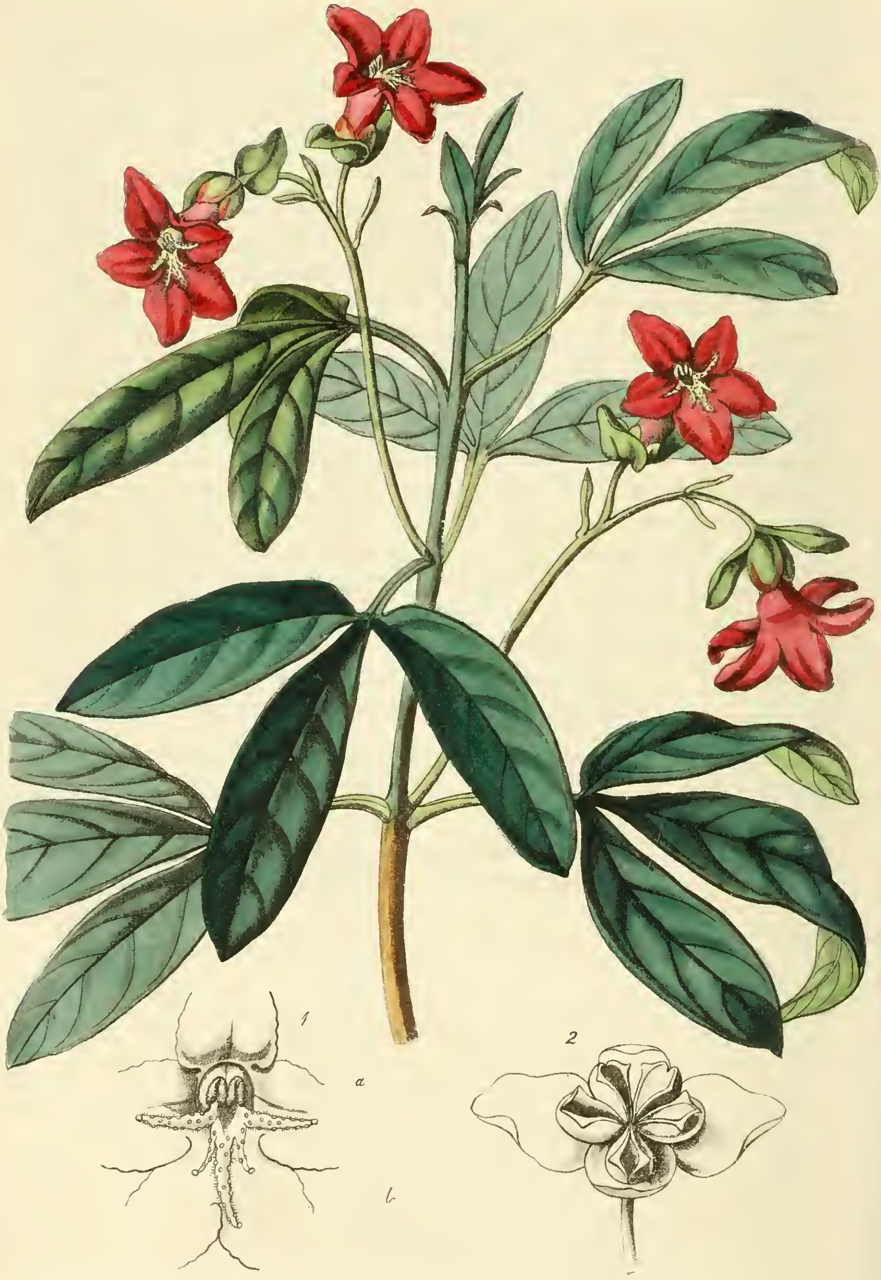
C. *labiata;* sepalis lineari-lanceolatis, petalis membranaceis undulatis multò latioribus, labello obovato crispo-undulato obtuso v. emarginato disco lævi, pseudobulbis oblongis sulcatis.
α. petalis lanceolatis undulatis, labelli disco sanguineo.
C. labiata. *Lindl. coll. bot. t.* 33. *Gen. et Sp. orch.* 116. *Hooker exot. fl. t.* 157. *Lodd. Bot. Cab. t.* 1856.
β. petalis oblongis subcrispis, labelli disco luteo sanguineo punctato aut picto.
C. Mossiæ. *Hooker in Bot. Mag. t.* 3669.

A native of La Guayra, whence it was imported by the London Nurserymen in considerable quantity some time since; and it is consequently dispersed through the country more plentifully than was imagined when it first flowered in Mr. Moss's garden at Liverpool. Since that period it has been sent me by several of my correspondents, and has appeared in the London exhibitions. The specimen from which the annexed figure was taken was communicated by Sir Philip Egerton, Bart., who bought it of Mr. Joseph Knight, in the King's Road.

Beautiful a plant as this is, and different as it sometimes appears to be from *C. labiata,* I am satisfied that it is a mere variety of that species, from which it differs principally in the lip being yellow, mottled with crimson, instead of deep blood red. The characters relied upon to separate it are—1. Its branching stem; 2. its furrowed pseudobulbs; 3. its broader sepals and petals and larger flowers; 4. its unguiculate petals; and 5. its colour: but none of these distinctions can be relied upon.

1. The branching stem is only a trifling modification of the ordinary habit of Cattleyas, whose rhizoma is the stem, of which the pseudo-bulbs are the branches. 2. The furrowed pseudo-bulbs exist equally in C. labiata. 3. Nothing can well be more variable than the size of the sepals and petals, and consequently of the flowers themselves in different individuals, and under different circumstances. Sir W. Hooker describes the original C. Mossiæ as being seven inches and a half in diameter, from the tip of the upper sepal to the end of the labellum ; from tip to tip of the two opposite petals eight inches and a half, each petal being a little more than four inches long, and two inches and a half broad ; twenty-four inches in the circumference of the entire blossom! One such specimen I have seen, in the collection of Mrs. Lawrence, and it is probable that similar cases will not be uncommon when the imported plants shall have recovered their full health ; but up to the present time the greater part of the specimens I have seen are not larger than the flowers in the annexed plate, and are therefore less rather than larger than C. labiata. 4. I do not find the petals more unguiculate in the one than in the other ; but they are broader and more crisp in *C. Mossiæ* than in its prototype. 5. To colour alone of course no importance can be assigned.

It is not merely in the case of C. Mossiæ that the supposed species of the genus require reconsideration. It is probable that C. Harrisonii is a var. of C. Loddigesii; and C. intermedia, is certainly nothing more than a state of *C. Forbesii,* with the yellow exchanged for white and purple.



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* LEMŌNĬĂ spectābĭlĭs.

Beautiful Lemonia.

PENTANDRIA *MONOGYNIA.*

Nat. ord. Rutaceæ, § Diosmeæ-Cusparidæ.

LEMONIA. Sepala 5, quorum par exterius foliaceum bivalve. *Petala* 5, connata, limbo subinæquali, tubo recto. *Stamina* 5, corollæ tubo adnata; 2 fertilia sessilia, 3 sterilia cornuta, exserta, glandulosa. *Discus* cyathiformis, crenatus. *Capsulæ* 5, liberæ, monospermæ. *Cotyledones* conduplicati, haud corrugati.

Lemonia spectabilis.

Frutex. Ramuli *pubescentes,* Folia *trifoliolata; foliolis petiolo pubescente longioribus, obovatis, obtusis, glabris.* Racemi *axillares, pauciflori, foliis subæquales.* Flores *purpurei, speciosi, pedicellati.* Sepala 5; *par exterius involucri bivalvis adspectu cui foliola ovata herbacea obtusa tubo corollæ breviora; cætera tria multò minora, subrotunda, concava, æqualia, tubo corollæ arctè appressa, pallida, margine rubentia.* Corolla *monopetala, phœnicea, carnosa, superficie rugulosâ, hypocrateriformis; tubo recto apice obliquo, limbo breviore; laciniis* 5, *oblongis, obtusis, nonnihil obliquè positis, superiore cæteris paulò breviore.* Stamina *in tubum connata intus pubescentem, corollæ tubum arctè vestientem;* Antheræ *duo superiores, (cum petalo minore alternæ) ovatæ, obtusæ, in apicem tubi staminei liberum sessiles;* 3 *inferiores steriles, cornutæ, glandulosæ, intermediâ trilobâ.* Ovarium *solidum, subrotundum, disco cyathiformi crenato immersum;* stylus *filiformis, glaber;* stigma *acutè 5-lobum.* Fructus *partes omnes citò solutæ, tandem in folliculos 5 monospermos suturâ ventrali dehiscentes mutatæ.* Carpella *glabra, intus reticulata; putamine elasticè separabili, cartilagineo, bivalvi.* Semina *solitaria, ascendentia, grisea, scabra, subrotundo-trigona, chalazâ magnâ discolore hilo circulari excavato proximâ.* Testa *crustacea, fragilis.* Endopleura *tenuis, carnosa.* Embryo *in se arcuatus, radiculâ elongatâ inflexâ, inter cotyledones bilobos conduplicatos haud corrugatos inclusâ.*

Messrs. Loddiges imported this plant from Cuba, and from a specimen in their possession the accompanying drawing

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* This very distinct and beautiful genus is named as a slight acknowledgment of the great benefits conferred, not merely upon science in general, but upon Botany in particular, by the large and well directed liberality of Sir Charles Lemon, Bart. M.P., whose garden at Carclew, near Penrhyn, in Cornwall, has been for many years a fruitful source of new and interesting plants.

October, 1840.

was made in August last. At that time it had been for some weeks in flower, and had lost something of the beauty which it possessed originally. It was still, however, a plant of no ordinary ornament.

Of course it will be a stove plant, but when we consider how few stove shrubs will produce their blossoms, such a novelty as this is doubly welcome.

It forms a genus of the Rutaceous order, allied to those American monopetalous genera, of which the Angostura bark tree may be taken as the type, and is in particular nearly akin to Monniera, a weed of tropical America, without any of the beauty of this plant. From Monniera it differs in the tube of the corolla not being curved, in its limb having but little irregularity, and in the disk being a regularly crenated cup, and not a permanent distinct two-toothed scale. It is the more interesting because it brings the genus Monniera more distinctly within the division Cusparidæ, with the ordinary genera of which it agrees in habit, while its organization agrees better with that of Monniera, the habit of which is but little in accordance with the rest of the division.

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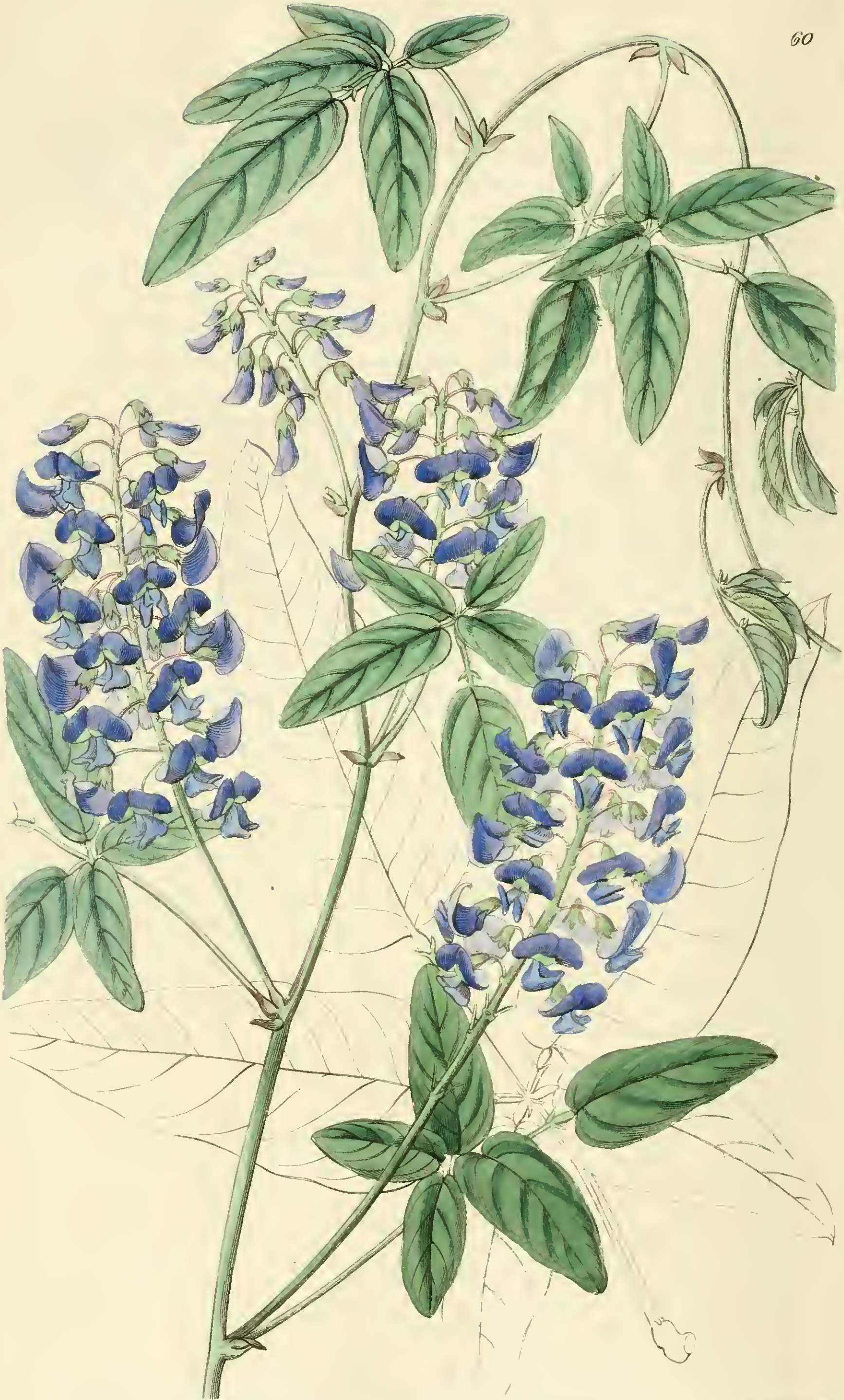

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* HARDENBĒRGĬĂ digitātă.

Finger-leaved Hardenbergia.

DIADELPHIA *DECANDRIA.*

Nat. ord. FABACEÆ, or LEGUMINOSÆ; § PHASEOLEÆ, *Bentham.*

HARDENBERGIA. Benth. Enum. pl. Hugel. p. 40. *Calyx* campanulatus, breviter 5-dentatus, subbilabiatus. *Corollæ vexillum* orbiculatum, subintegrum, basi angustatum, exappendiculatum, vix unguiculatum, alis longius. *Alæ* obliquè obovato-oblongæ. *Carina* alis ultra medium adhærens, et iis brevior, incurva, obtusa. *Stamina* distinctè diadelpha; filamento vexillari basi recto inarticulato. *Ovarium* pluriovulatum. *Stylus* brevis, adscendens, subulatus. *Stigma* capitatum subpenicillatum. *Legumen* lineare, compressum, intùs isthmis cellulosis submultiloculare. *Semina* strophiolata. —— Frutices *volubiles,* Australasici, sæpiùs glabri. Folia *pinnatim trifoliolata, vel unifoliolata;* foliolis *stipellatis.* Stipulæ *et* bracteæ *minutæ.* Pedunculi *axillares, multiflori.* Pedicelli *ebracteolati.* Calyces *glabri.* Corollæ *cœruleæ aut violaceæ.* Bentham de Legum. gen. p. 124.

H. *digitata;* foliis digitatis, foliolis ovato-oblongis obtusis terminali longiùs petiolato, stipulis angustè triangularibus, racemis pedunculatis multifloris foliis longioribus, vexillo oblato acuto. *Bot. Reg.* 1840. *misc. no.* 142.

H. macrophyllæ (Kennedyæ? macrophyllæ, supra t. 1862.); similis, sed foliis digitatis et floribus duplo minoribus diversa.

A new Swan River climber, raised by Mr. Toward in the garden of H. R. H. the Duchess of Gloucester, at Bagshot. It is clearly distinguished from all the previously discovered species of the genus, by its leaflets growing in fives, not in threes. Its flowers too are smaller than in any of the other species.

Mr. Toward informs me that "its fine growth and profuse blossoms render it a very valuable greenhouse climber, fully equal, if not superior, to any of its congeners." I do not quite agree to this, for H. Comptoniana is brighter coloured and has finer corollas ; but it is certainly a welcome acquisition. It first flowered in April of the present year, and will no doubt prefer the spring for its blossoming season.

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* Named by Mr. Bentham after the Countess of Hardenberg, a noble Austrian lady, sister to Baron Hugel, and in whose garden the plants collected by her brother in his travels, were carefully nursed until his return.

In the garden of the Horticultural Society it is found to require the same treatment as other weak trailing greenhouse plants, and may be grown and flowered successfully either by being trained up a rafter, or round the convenient trellis work now so common as a support for such plants, when grown in pots. The latter method is particularly desirable where it is wished to move the plant from one house to another, or to have its flowers near the eye. The best soil is loam and peat mixed with a quantity of sand. It strikes readily from cuttings.

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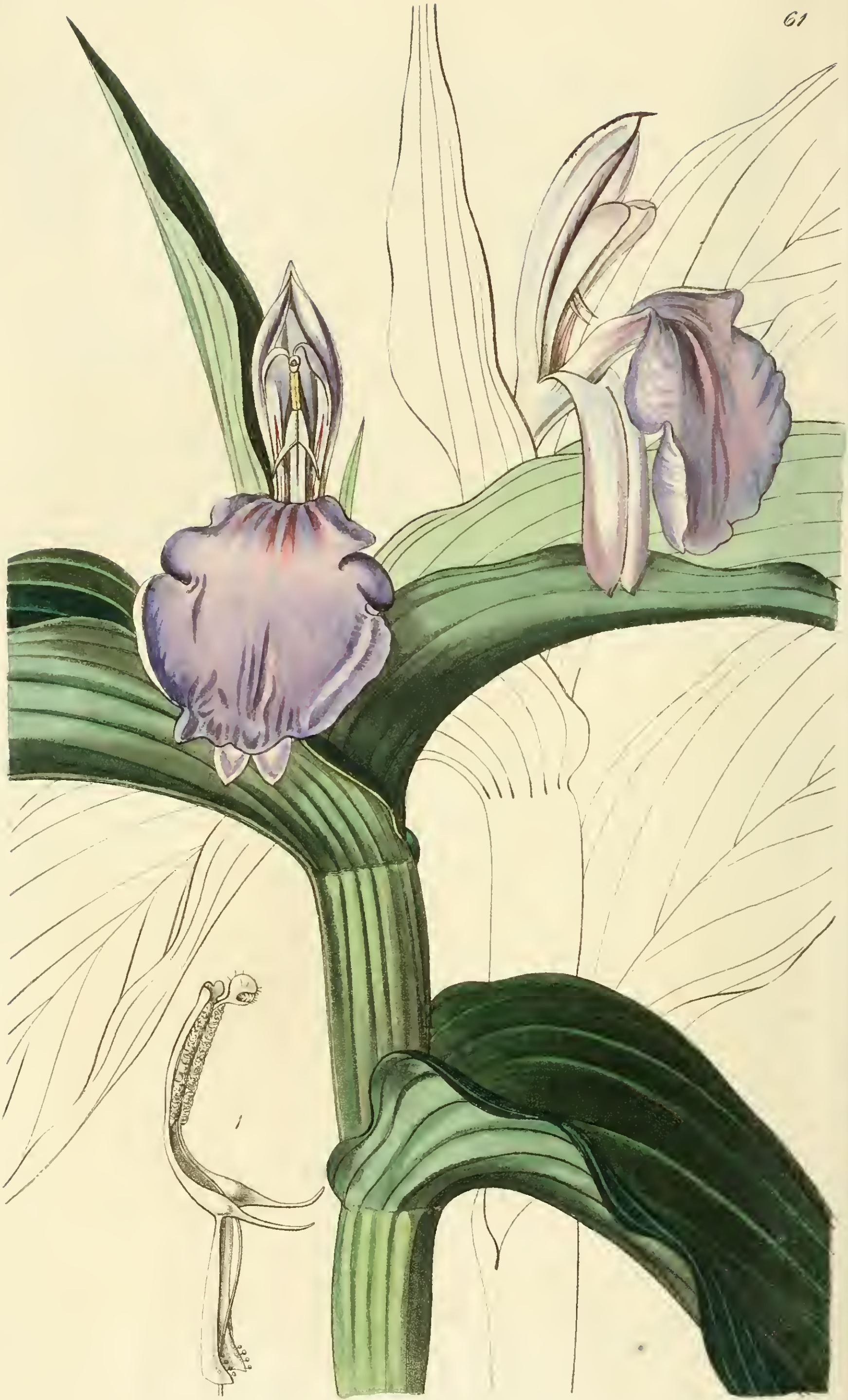

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ROSCŎĔĂ purpŭrĕă.

Purple Roscoea.

MONANDRIA *MONOGYNIA.*

Nat. Ord. ZINGIBERACEÆ.

ROSCOEA. Smith. Calyx tubulosus. *Corollæ tubus* sursùm dilatatus; limbi *laciniæ exteriores* laterales angustæ patentes, postica fornicata, erecta; *interiores* laterales breves, posticè conniventes; *labellum* majus, bilobum. *Filamentum* brevissimum, carinatum, *antherâ* incurvâ basi bicalcaratâ terminatum. *Ovarium* inferum, triloculare. *Ovula* in loculorum angulo centrali plurima, horizontalia, anatropa. *Stylus* filiformis; stigma globulare perforatum. *Capsula* trilocularis, loculicido-trivalvis. *Semina* plurima, arillata. —— Herbæ *nepalenses; radice e tuberibus fasciculatis,* caule *erecto, folioso,* spicâ *subcapitatâ bracteatâ.* Endlicher, Genera Plantarum, p. 223. no. 1625.

R. *purpurea;* spicâ brevi sessili intra foliorum vaginas inclusâ, petalis exterioribus lateralibus collateralibus labello obovato undulato integro suppositis pendulis.

R. purpurea. *Smith exot. Bot.* 11. 97. *t.* 108. *Linn. Trans.* xiii. 461. *Rees. Cyclop. Hooker exot. fl. t.* 144. *Rosc. monand. pl. t.* 86. *Dietrich, sp. pl.* 1. 38. *Royle Illustr. t.* 89. *f.* 3.

This beautiful herbaceous plant has long been known, and frequently introduced to our gardens from India, where it inhabits the northern provinces; but it is rarely met with in cultivation. According to Dr. Royle "the whole genus, which is peculiar to the Himalayan Mountains, is that which among the Ginger Tribe is found at the highest stations. *R. purpurea,* now figured, the most common species in Nepal and Kemaon, is extremely abundant at Simla and Mussooree, and as far down as Jurreepannee. *Roscoea elatior* is found at Dhunoulthee; and with the former also in Nepal and Kemaon. *Roscoea spicata,* discovered on Sheopore and Gossain Than, occurs in the same situations as Hedychium spicatum; but *R. alpina* is that which reaches the highest elevation, as I have found it as high as 9000 feet on Tuen Tibba, immediately after the accession of the rains, and on places from where the snow has just melted, like the Snowdrop in European countries in early spring; but it may be found much higher, as on the Choor mountain, which like the above is for more than six months covered with snow."

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* So named by Sir James Ed. Smith in honour of William Roscoe, Esq. the reformer of the Scitamineous plants of Linnæus, of which this genus is one.

November, 1840.

The latter species is very like that now figured, but is smaller in all its parts, and has a distinctly two-lobed lip. The very circumstance of its appearing in such cold places in India would have justified the expectation that *R. purpurea* also would prove more capable of bearing a low temperature than is usually supposed; and in fact it is by no means even a greenhouse plant, but a fine half-hardy perennial, growing about eighteen inches high, and flowering from the beginning of August to October; and it would probably prove quite hardy in the warmer parts of Ireland.

It may be increased freely by division of the roots or by seeds; the latter only requiring to be sown in a cold frame any time during summer; the seedlings will flower freely the second season.

The roots should be kept quite dry when in a dormant state; but like all Scitamineous plants they should have artificial heat and plenty of moisture to start them in the spring, and during the earlier part of the growing season.

The plants from which the annexed figure was made, were raised in the garden of the Horticultural Society, from seeds received from the Honourable Court of Directors of the East India Company, through Dr. Royle, in May, 1839.

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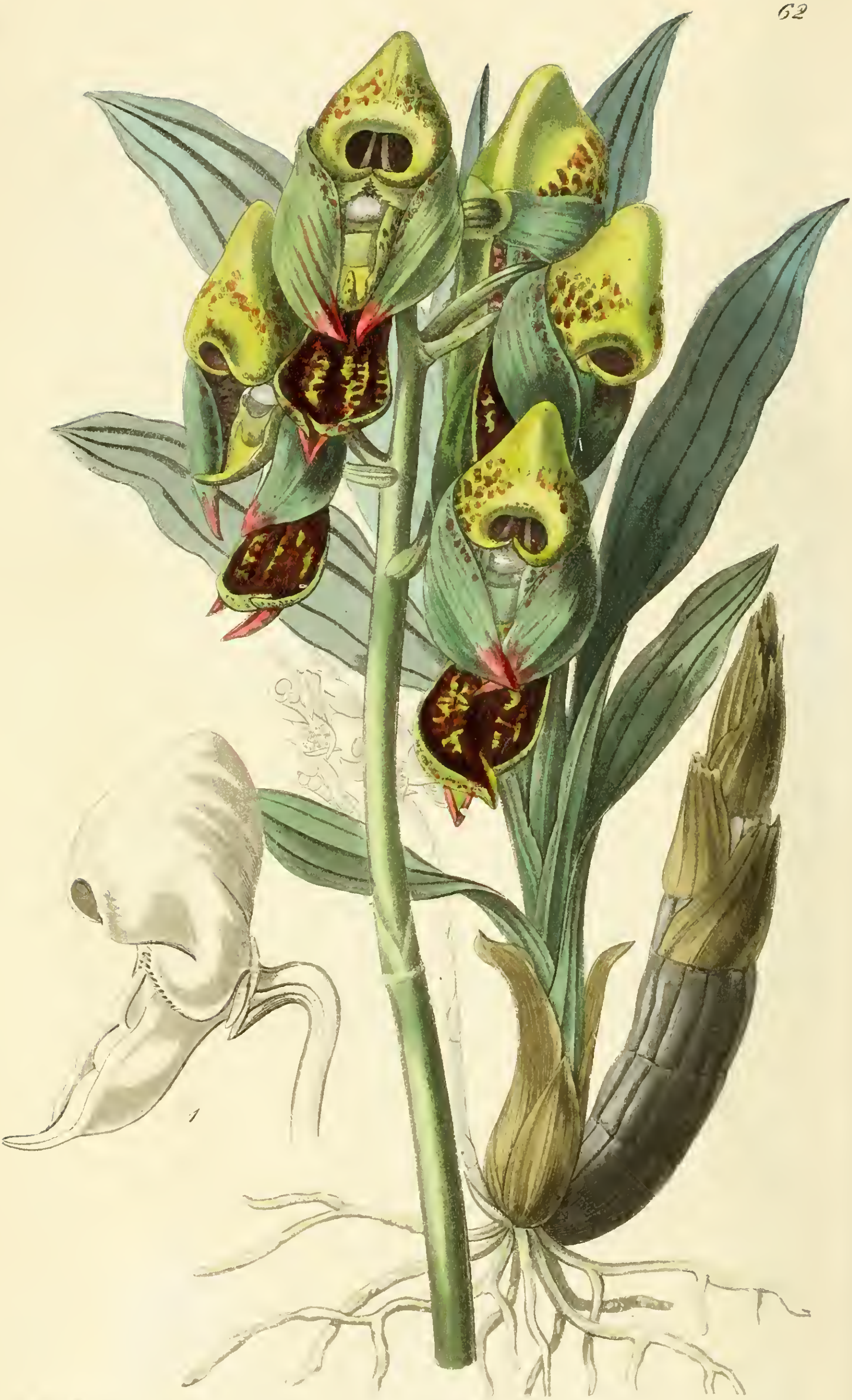


Miss Drake del. Pub. by J. Ridgway 169, Piccadilly Nov 1 1840 J. Barclay sc

CATASĔTŪM maculātum.

Spotted Feelerbloom.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDACEÆ, § VANDEÆ.

CATASETUM. Botanical Register, vol. 20. *fol.* 1667.

C. *maculatum;* sepalis petalisque conniventibus, labello carnoso galeato basi inflexo lateribus suis invicem imbricantibus.

α. labello basi ciliato.

C. maculatum. *Bateman Orchid. of Mexico & Guatemala, t.* 11. *an Kunthii?*

C. integerrimum. *Hooker in Bot. Mag. t.* 3823.

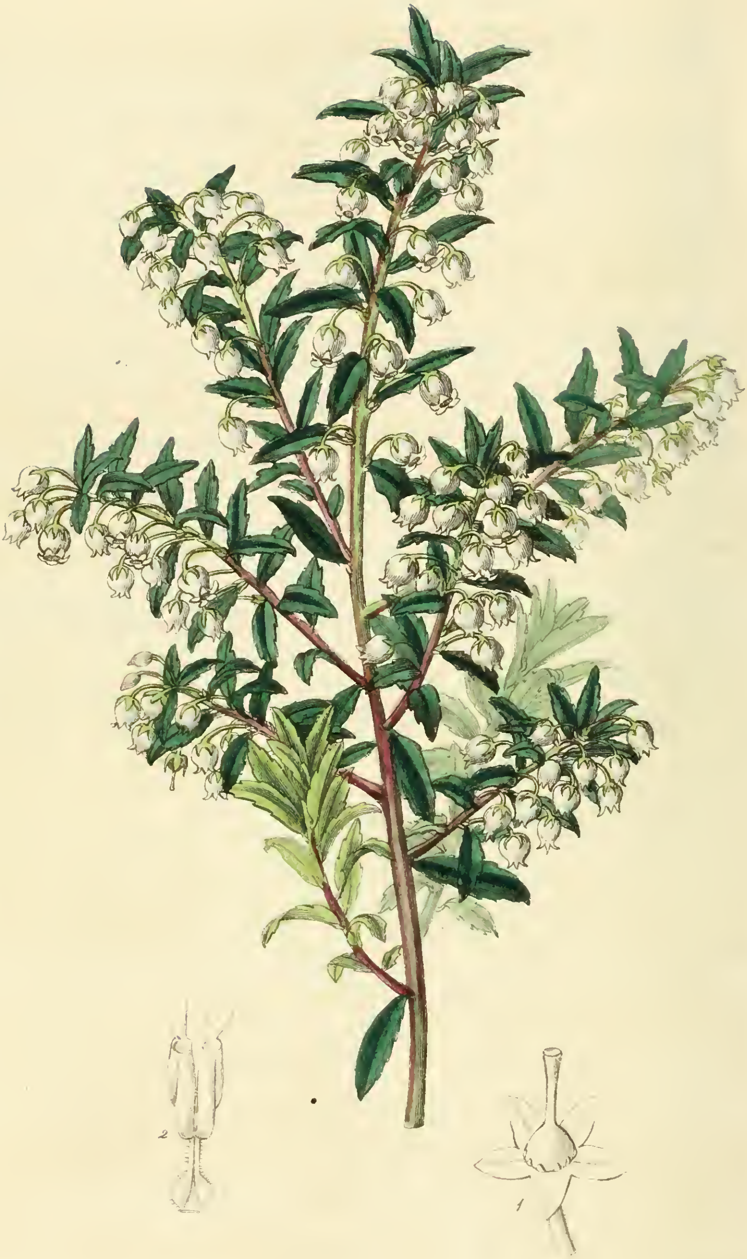
β. labello basi lævi.

This Catasetum is very nearly the same as the old *C. tridentatum,* from which it differs in its helmet-shaped lip having the lower edges brought together so as to press upon the column, instead of being wide apart. Whether or not it is the *C. maculatum* of Kunth I am unable to say. It probably is, it possibly is not. That plant was never seen by the Botanist who described it, but it was taken up from M. v. Humboldt's notes. Those notes were made upon the living plant as found at Turbaco, and are therefore less liable to error than if they had been made up from a dried specimen. Now Baron Humboldt says that in his plant the petals are somewhat serrated, and the leaves only three inches long, arising from the *apex* of the bulb; but here the petals are not serrated, the leaves are nearer a foot in length, and they arise from the sides, not apex, of the pseudo-bulb. Are these differences unimportant? Serrated petals are not uncommon in the order, but they have not yet been seen in Catasetum; in this plant the lip is sometimes serrated, sometimes perfectly even at the edge; perhaps therefore the petals may be also both serrated and entire in different individuals. It is probable that there is some mistake about the length of the leaves, because no such size either has been or seems likely to be seen in a genus like Catasetum. Whether the leaves arise from near the apex or sides of the stem or pseudo-bulb is certainly unimportant in this genus.

At all events the plant is certainly the *C. maculatum* of Mr. Bateman, and the *C. integerrimum* (why integerrimum?) of Sir William Hooker.

According to Mr. Skinner this species grows in a mean temperature of 75° to 80° Fahr.

If the cultivator of this species chooses to suspend it from the roof of the stove instead of growing it in a pot, he should be careful to surround its roots with some substance capable of retaining moisture, as it requires to be kept in a very moist state during the time in which the flowers are forming, and if this is not attended to they will frequently wither without opening. But the better way is to keep it in a pot, almost dry until it has begun to grow, and even then water must be given sparingly until the pseudo-bulbs begin to form, because at this period too much water will certainly damage the young shoots. In other respects as regards soil, temperature, propagation and general treatment, it must be managed in the same way as C. tridentatum and other plants of this kind.



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PERNĔTTY̆Ă angustifŏlĭă.

Narrow-leaved Pernettya.

DECANDRIA *MONOGYNIA.*

Nat. ord. Ericaceæ, § Arbuteæ.
PERNETTIA. Botanical Register, vol. 20. *fol.* 1675.

P. *angustifolia;* erecta ramosa, ramulis minutissime puberulis angulatis, foliis lineari-lanceolatis mucronato-acuminatis remotè serratis glabris 1-nerviis, pedicellis axillaribus solitariis unifloris folio dimidio brevioribus glabriusculis nudis basi imâ tantùm bracteolatis.

Fruticulus *sempervirens, rigidus, erectus, ramosus, glaber.* Folia *quam in P. phillyreifolia duplò minora et minùs rigida;* Flores *adhuc minores; et* pedicelli *e bracteolis quibusdam erumpentes nec per dimidiam longitudinem et ultrà squamulis imbricati.*

In the gardens this plant is called *Pernettya phillyreifolia,* a Peruvian species collected by Dombey. But upon comparing it with authentic specimens of the latter, for which I am indebted to the Administration of the Royal Museum of Paris, it proves to be different in several respects. The leaves are much smaller in all directions, and not so rigid; the flowers too are smaller, and the pedicels are quite destitute of scales upon their sides, unless at the very base; in P. phillyreifolia, on the contrary, the pedicels are clothed with small scales nearly to the calyx, or at least as far as the middle.

Fig. 1. represents the calyx spread open so as to show the 10 hypogynous scales, *which stand in pairs opposite the sepals;* fig. 2. is one of the stamens with the cloven 4-horned anther.

This species is said to be a native of Valdivia. It was sent me by Mr. Cameron, the excellent manager of the Birmingham Botanic Garden, and has also been communicated by Messrs. Lowe and Co. of Clapton.

It is a very pretty little shrub, hardy, but like all the others of the genus very subject to die during the hotter part of the summer, particularly if exposed to the mid-day rays of the sun.

The only way to keep fresh plants in good health for any length of time is to grow them in pots, or in some place amongst American plants in the peat-border. If they are planted out the situation chosen should be where the rays of the sun never fall directly upon them, but where they have plenty of light and air, without being overhung much by larger plants, or exposed to the extremes of wet and dry; when planted out, the best precaution is to cover the surface with bog moss during the summer, but this should be removed again in the autumn. The plants must on no account be watered during very dry weather, as it is almost sure to destroy them. If kept in pots they should be placed in a frame with the back to the south or east, never allowing the sun's rays to pass directly upon them during summer; keeping the lights on during the day, and always taking them off during the night.

The seeds may be sown any time from March to August in a close frame, but should never have any artificial heat after the plants are potted off. If they are weakly they should be kept close during winter under a bell glass, and should be treated like cuttings of heaths. They should be potted in brown peaty soil with very little sand in it.

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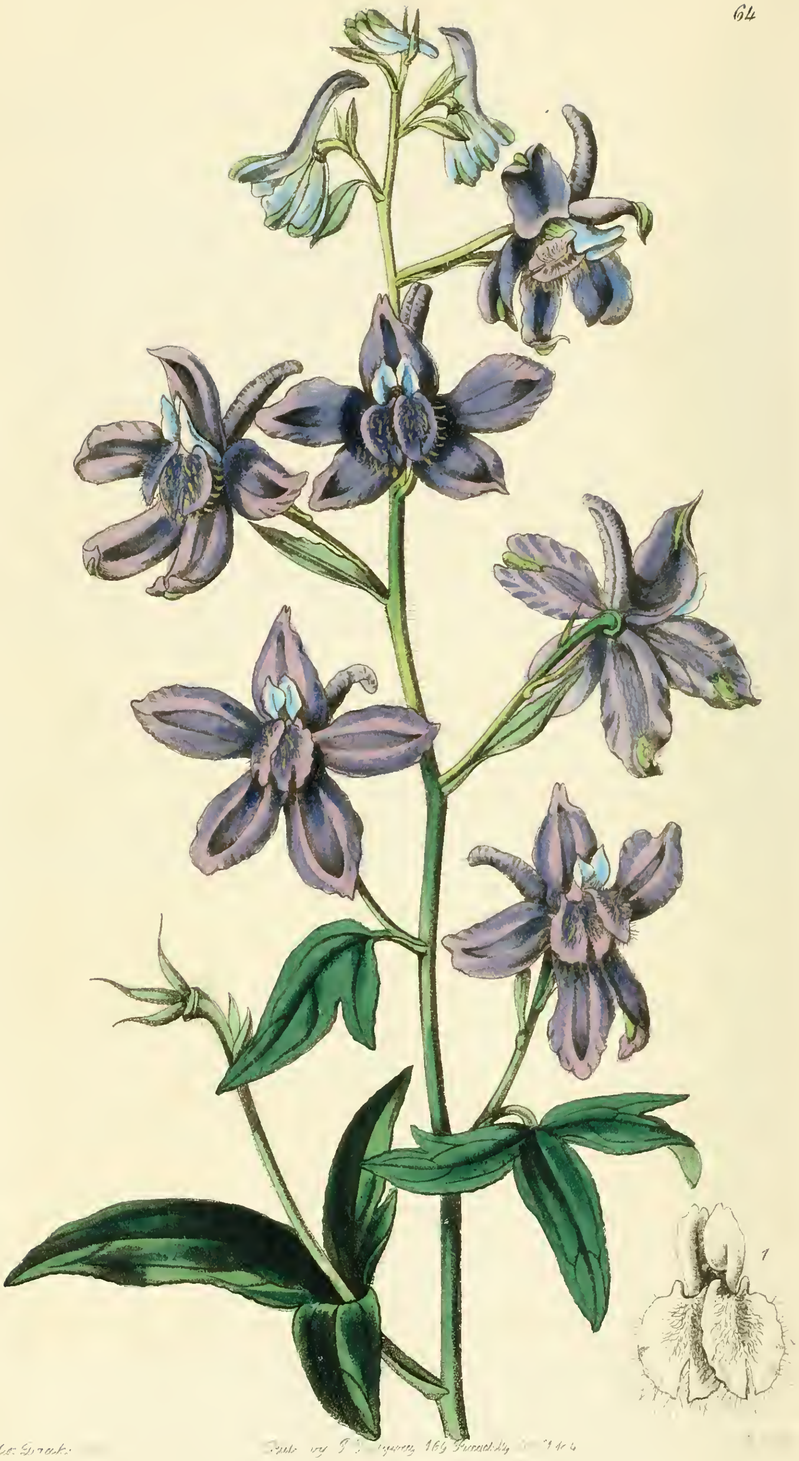

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DELPHĬNĬŪM decōrum.

Pretty Larkspur.

POLYANDRIA *TRI-PENTAGYNIA.*

DELPHINIUM. Botanical Register, vol. 14. *fol.* 1192.

Sect. DELPHINASTRUM. Coh. *Grumosa;* petalorum laminâ dilatatâ bifidâ; petiolis basi vix dilatatis; radice tuberoso-grumosâ. Huc D. Menziesii, elegans, tricorne, *Fischer & Meyer, Index tertius seminum, p.* 33.

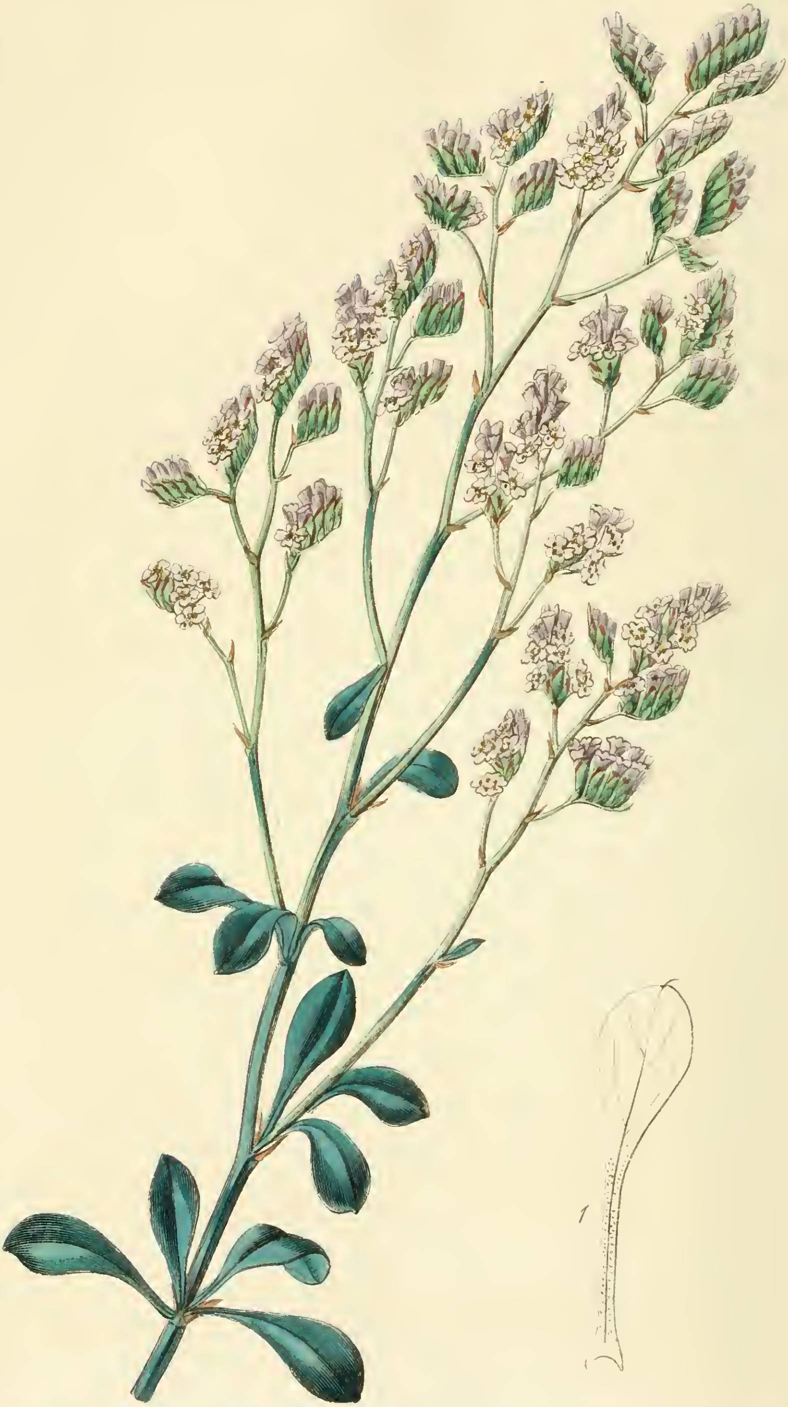
D. *decorum;* pubescens, subglabrum, foliis tripartitis: segmentis lateralibus bifidis indivisisve, lobis oblongis tridentatis v. integerrimis, floralibus bracteisque suboblongis (plerumque) integris, calcare curvulo sepalorum longitudine, carpellis 3 divaricatis. *Fisch. & Mey. l. c.*

A pretty hardy perennial, raised by Mr. Cameron in the Botanical Garden, Birmingham, and communicated by him in June last. It is a native of New California, near the Russian settlement at Port Bodega, whence seeds were received by Dr. Fischer, the director of the Botanical Garden, St. Petersburgh, and by him communicated to the rest of Europe.

In the third Index of seeds gathered in the Botanic Garden of St. Petersburgh the species is first mentioned, as being nearest in affinity to D. Menziesii and D. elegans, but clearly distinguished by the leaves. The flowers were described as being showy, at first bluish violet, but afterwards violet purple.

In the specimens sent from Birmingham the leaves were uniformly three-lobed, with the intermediate division ovate or oblong, acute and undivided, while the lateral divisions, placed at right angles to it, were often two-lobed, and sometimes divided into several secondary segments in the posterior lobe.

I am not aware that this requires any peculiar treatment, otherwise than that which is given to other perennial Larkspurs.



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STĂTĬCĒ pectinātă.

Comb-flowered Sea Lavender.

PENTANDRIA *MONOGYNIA.*

Nat. ord. Plumbaginaceæ.

STATICE. *Botanical Register, vol.* 17. *fol.* 1450.

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§. *Caule ascendente folioso.*

S. *pectinata;* caule ascendente folioso triquetro foliisque obovatis longè petiolatis setaceo-apiculatis lepidotis, paniculæ ramis omnibus fertilibus, spiculis densissimis distantibus compressis secundis, corollis calyce parùm longioribus.

S. pectinata. *Ait. Hort. Kew. ed.* 1. 1. 385. *Hornemann, hort. hafn. suppl. p.* 37.

Caulis *debilis, ascendens, ramosus, ad articulos densè foliatus.* Folia *obovata, apice rotundata, mucrone setaceo apiculata, in petiolum angustum attenuata, squamulis pallidis præsertim cis apicem lepidota.* Flores *parvi, pallidè violacei.*

This rare species was originally found by Masson in the Canaries, and by him introduced into the Royal Botanic Garden, Kew, in the year 1780. One of his wild specimens given to the late Mr. James Donn of Cambridge is now before me. It was afterwards gathered in the same islands by the ill-fated Christian Smith, and from his seeds raised in the Botanic Garden, Copenhagen. For the third time it was found by Messrs. Webb and Barthellot in Teneriffe, and from a plant raised from their seeds the figure now, for the first time given, was made in 1832, specimens having at that time been sent me by Mr. Young of the Milford Nursery.

It forms one of the caulescent division of this difficult genus, and is readily recognized by its nearly triangular stem, with long-stalked obovate leaves always tipped with a conspicuous weak bristle.

It is a pretty, half-hardy or greenhouse perennial; but, like many of the other species it flowers so very freely that the plants generally become exhausted, and are only of two or three years duration.

It grows from one to three feet high, and flowers most part of summer if planted out in the flower borders, but it will not withstand the winter, and therefore should be raised from seeds every other year, which, as it produces them freely, is by far the best way to obtain strong healthy plants.

The seeds should be sown about March or April, and treated like those of other half-hardy perennials, potting them off when large enough. As they are subject to damp during winter, more especially if watered over head, it is necessary to cover the surface of the pots with silver sand, and to place them in a dry airy place secure from frost.

I may take this opportunity of stating that the *Eurychiton adensis* of Graham's catalogue of Bombay plants, last page, a plant collected at Aden by Dr. Heddle, is a species of Statice, as I have ascertained from a specimen kindly communicated by Mr. Nimmo.

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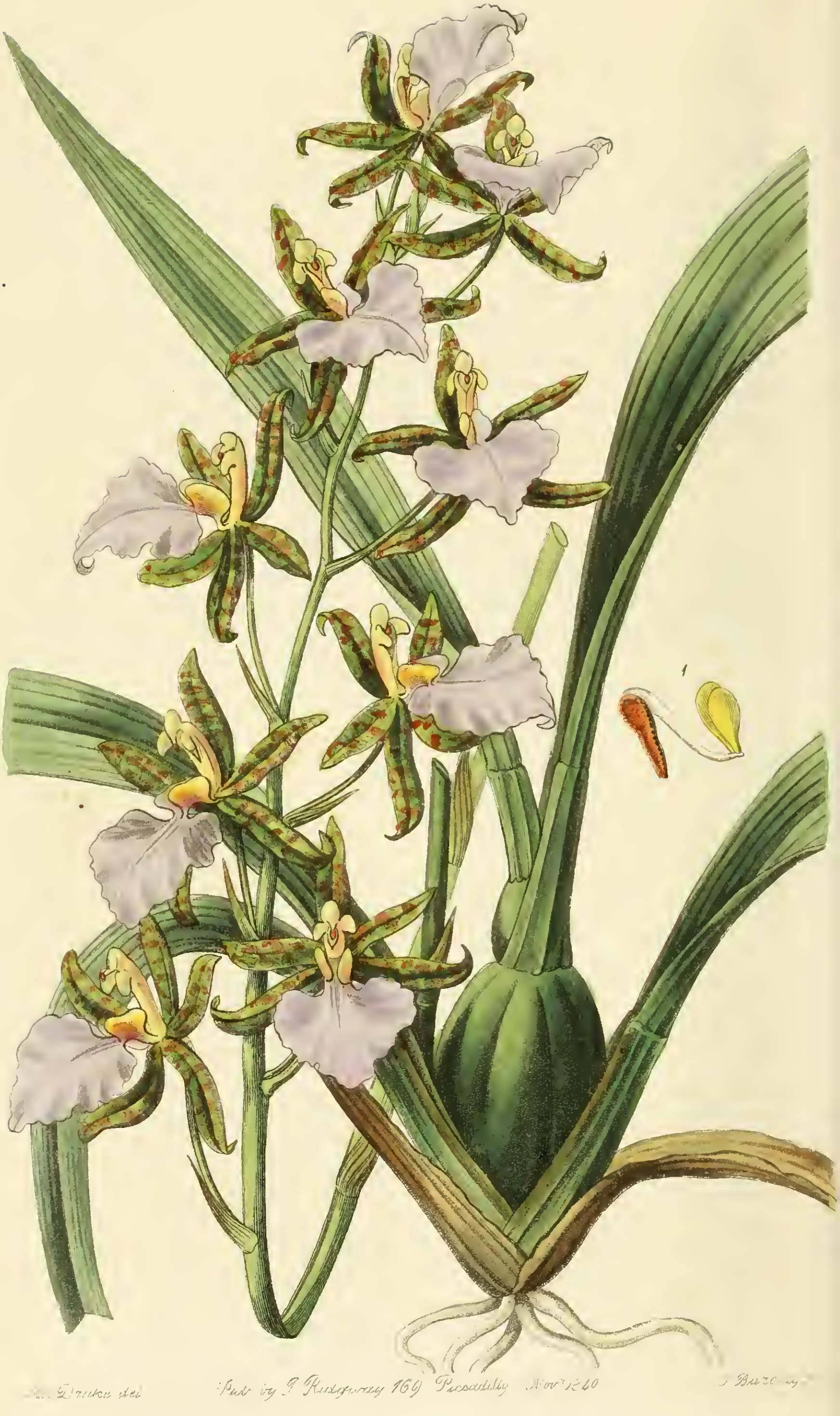

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Pub by J. Ridgway 169 Piccadilly Nov 1840

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ODONTOGLŌSSŪM Bictoniēnsĕ.

The Bicton Tooth-tongue.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDACEÆ, §. VANDEÆ.

ODONTOGLOSSUM. Botanical Register, vol. 1839. *fol.* 48.

O. *Bictoniense;* pseudobulbis oblongis compressis 2-3-phyllis, foliis ensiformibus undulatis patentibus scapo racemoso duplò brevioribus, bracteis herbaceis lanceolatis acuminatis ovario duplò brevioribus, sepalis petalisque subæqualibus lineari-lanceolatis maculatis, labelli ungue bilamellato laminâ cordatâ acuminatâ undulatâ, columnæ alis integris.

α. labello rosco.

O. Bictoniense. *Sertum Orchidaceum sub. t.* 25.

Cyrtochilum Bictoniense. *Bateman, Orch. Mexic. & Guatemala, t.* 6.

β. labello subalbido.

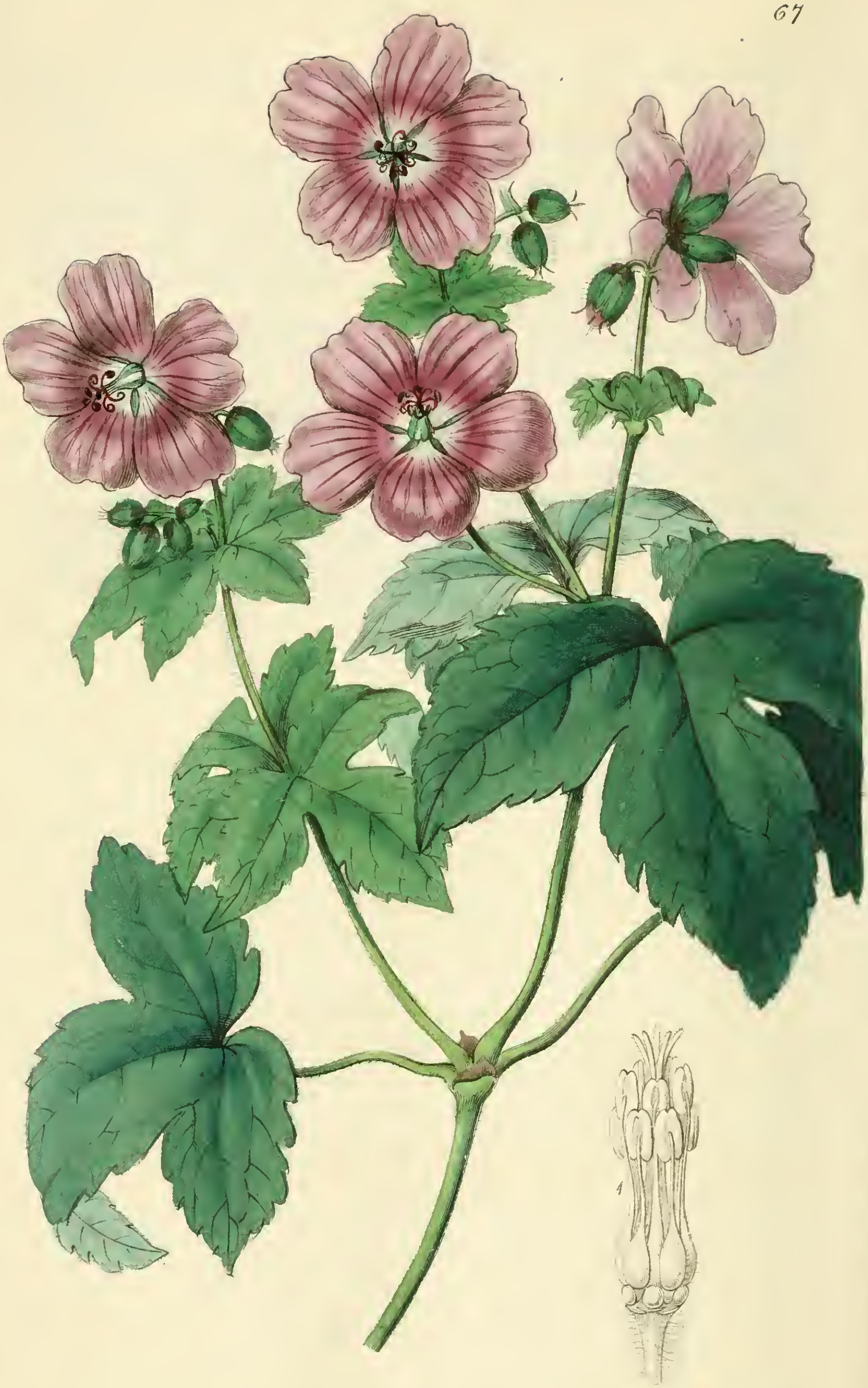
Zygopetalum africanum. *Hooker in Bot. Mag. t.* 3812.

A native of Guatemala, whence it was sent to Mr. Bateman by his correspondent Mr. Skinner. Having however been also communicated at the same time to Lord Rolle and Sir Charles Lemon, it first flowered at Bicton, whence the beautiful specimen figured in Mr. Bateman's work, t. 6, was sent. That now represented was given me by Mr. Bateman in April, 1837.

It has already been observed, in the Miscellaneous notices of this work, No. 139, for the present year, that the *Zygopetalum africanum,* sent to Sir W. Hooker from Mr. Forbes of Woburn, as a Sierra Leone plant, collected by Mr. Whitfield, is no other than a pale variety of this species. Upon turning to Mr. Bateman's work I see that he speaks of a variety "with a pure white lip, and pale green sepals and petals faintly blotched with a darker colour:" and it is probable that the Woburn plant belongs to that very variety. Most assuredly it never came from Sierra Leone. Those who have charge of imported plants ought to be very careful that they make no mistakes regarding so very important a subject.

With regard to the genus Zygopetalum itself, it is distinctly separated from Odontoglossum by the crest of its lip being solid and transverse, by its column having no ears, and by its sepals and petals being directed upwards above the level of the centre of the flower.

Those who cultivate the thin leaved species of Oncidium, such as O. altissimum, will find the same treatment applicable to this plant. It will grow very well in a pot, but better if hung up; if treated in the former way it should be planted upon the top of the soil, and its roots allowed to scramble over the surface of the pot. In either case its roots and leaves must be well watered and syringed during the growing season, and must never at any time be kept so dry as Catasetums and plants of that description.



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GERĂNĬŪM rubifŏlĭūm.

Bramble-leaved Geranium.

DECANDRIA *PENTAGYNIA*.

Nat. Ord. GERANIACEÆ.

GERANIUM. Supra vol. 3. fol. 263.

G. *rubifolium;* perenne, erectum, pilosum, caule tereti, foliis cordatis oppositis 3-lobis laciniis ovatis grossè serratis, stipulis triangularibus distinctis, pedunculis terminalibus bifloris, petalis emarginatis calyce multò longioribus, staminibus liberis stigmatibus parùm brevioribus.

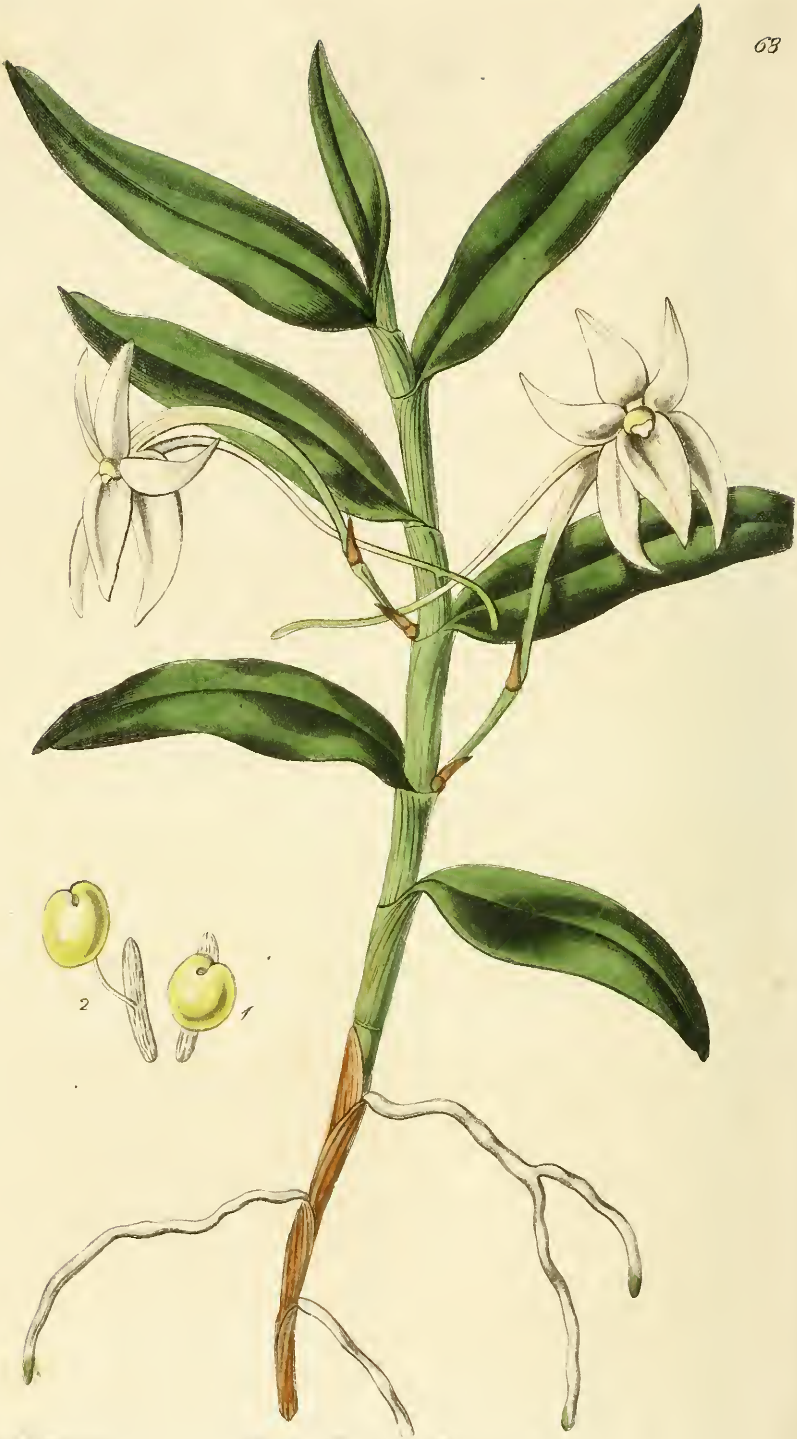
The erect habit of this plant and its large flowers distinguish it from *G. nepalense;* its distinct stipules and constantly 3-lobed leaves from *G. Wallichianum.* In a general classification of the genus it will be arranged in the neighbourhood of *G. nodosum*, than which however it is a much handsomer plant, with differently formed leaves.

It is a neat hardy perennial, by no means so robust a grower as many of the other hardy geraniums, scarcely exceeding a foot in height.

It should be planted in light soil, or on rock work, as it is soon destroyed by the wet in winter.

It flowers in July and August, and may be increased by dividing the roots when in a dormant state, or by seeds which are produced freely, but the seedlings will not flower before the second season.

It was raised in the garden of the Horticultural Society, from Himalayan seeds presented by Dr. Royle in May 1839.



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ANGRÆCUM gladiifolium.

Sword-leaved Angrec.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDACEÆ, § VANDEÆ.
ANGRÆCUM. Botanical Register, vol. 18. *fol.* 1522.

A. *gladiifolium;* caulescens, foliis distantibus lanceolatis acutis, pedunculis axillaribus unifloris, floris patuli phyllis omnibus ovato-lanceolatis acutis, calcare gracili pendulo pedunculo subæquali.
Orchis Mauritiana. *Poir. dict.* 4. 601. sec. Ach. Rich.
Aerobion gladiifolium. *Spreng. syst.*
Angræcum gladiifolium. *Thouars orch. afr. t.* 53. *Ach. Rich. orch. maurit. p.* 69. *Lindl. Genera and Species of Orchidaceous plants, no.* 5.

A native of the islands of Bourbon, Madagascar, and the Mauritius, where it seems to have been first met with by Commerson. It was afterwards collected by Du Petit Thouars and others, flowering in the month of February. Like the greater part of the genus it is a plant of little beauty. For the opportunity of making a drawing of it I am indebted to Messrs. Loddiges.

The figures 1 and 2 represent the pollen-masses, which adhere each to a separate oblong gland, in which respect this species differs essentially from *A. eburneum.* It will, however, be found that the greater number of Angrecs possess two glands, either quite separate, or touching each other so as to form a slight adhesion. To determine the real value of this character requires a complete revision both of this and of the neighbouring genera, particularly of Œceoclades, some of the plants referred to which are certainly true Angrecs, as for example *Œ. funalis* and *Retzii.*

Among the minute species of Angrec are many still unknown to systematic Botanists. The following specific distinctions of a few will serve to fill a vacant page.

Angræcum *tenue;* aphyllum, acaule, radicibus longissimis intricatis, spicis tenuibus filiformibus erectis simplicibus, sepalis petalisque acuminatis apice reflexis, labello ovato acuto calcare erecto oblongo carinato.——A multitude of very long entangled roots, without leaves, form the principal part of this plant, which seems wholly destitute of leaves. The spikes are clustered, and are from two to four inches high. The flowers are the smallest in the genus.——*On trees near Pará, Martius.* (herb. reg. monac.)

Angræcum *Fasciola;* aphyllum, acaule, radicibus longissimis flexuosis, spicis erectis multifloris distichis distantibus, sepalis petalisque linearibus acutis, labello membranaceo petalis adnato! apice brevi triangulari, calcare pendulo obtuso inflato lævi.——A small leafless plant, with the habit of *A. tenue,* only the flowers are much larger, although very small, and distinctly distichous. It answers to the short character we possess of *Limodorum Fasciola,* a plant I have never seen; but as the latter is a native of the Society Islands it is probably distinct.——*Demerara, Schomburgk* (herb. propr.)

Angræcum *ornithorhynchum*;foliis acicularibus, spicis oppositifoliis brevibus paucifloris (5-6), sepalis petalisque lineari-lanceolatis acutis, labello ovato apice triangulari subcarnoso, antheræ apice elongato obtuso membranaceo, calcare tereti ascendente ovario longiore.——Resembling *A. subulatum* in habit, but quite different in its flowers.——*Saint Catharines in South Brazil, Tweedie* (herb. Hooker).

Angræcum *polystachyum;* caulibus ramosis, foliis distichis ovalibus coriaceis obliquè bidentatis, spicis oppositifoliis flexuosis multifloris foliis paulò longioribus, bracteis orbiculatis ciliatis, sepalis basi et apice ciliatis, labello subrotundo cuspidato calcare vesiciformi.——A cæspitose plant, throwing out long roots from the lower part of its stem, whose branches are only two or three inches long. A spike of very minute flowers proceeds from opposite every leaf.——*Peru, Mathews,* 1905. (herb. Hooker).

Angræcum *brevifolium;* foliis coriaceis lineari-oblongis obtusis obliquè emarginatis, spicis oppositifoliis brevissimis, sepalis petalisque obtusis, labello obsoletè trilobo obtuso, calcare clavato ovario longiore.—— Stems long, rooting, with a few leaves at their extremity. Flowers exceedingly small.——*Brazil, where it was found by the Prince Maximilian of Wied Neuwied.* (herb. reg. monac.)

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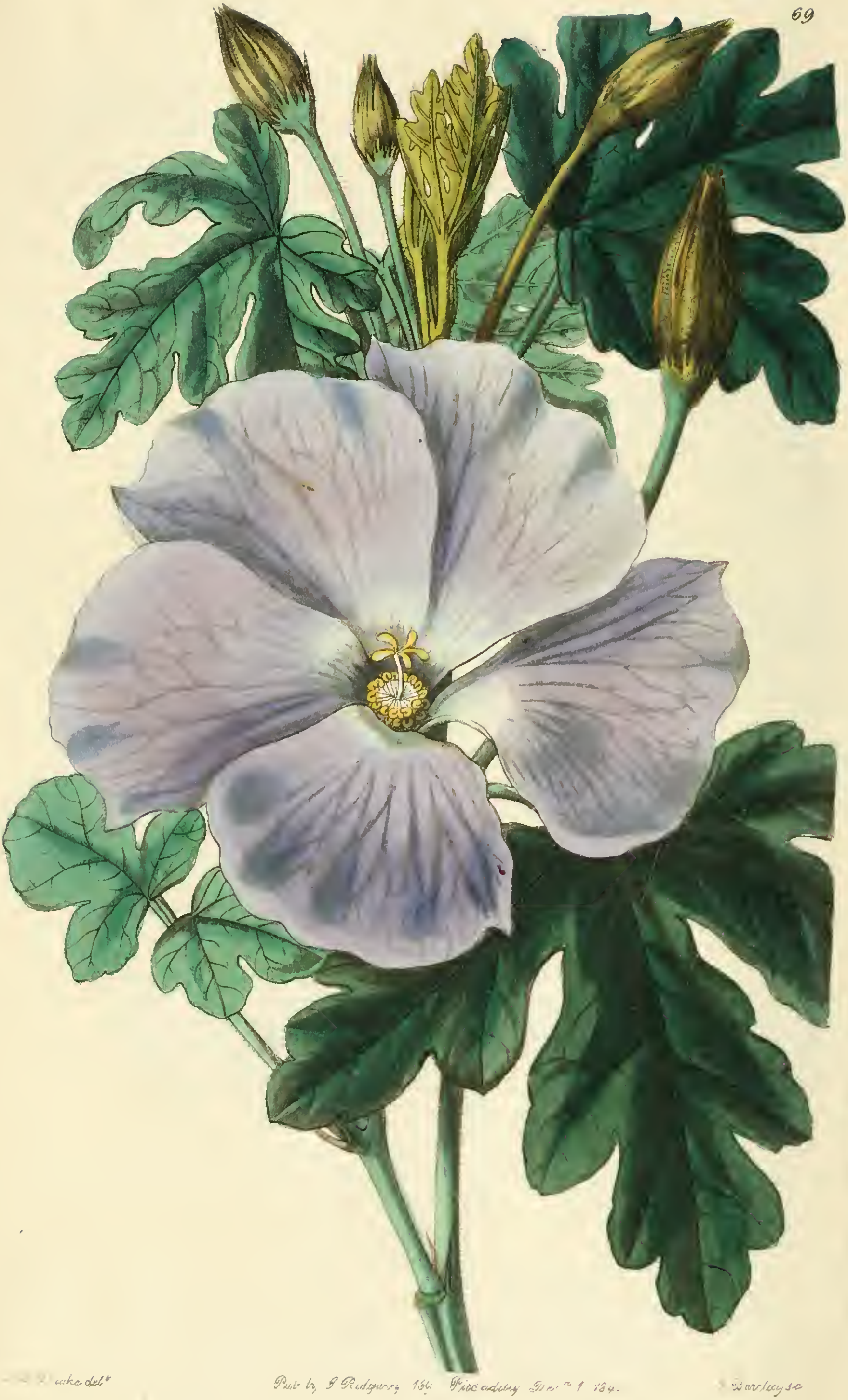

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HIBĪSCŬS Wrāyǣ.

Mrs. Wray's Hibiscus.

MONADELPHIA *POLYANDRIA.*

Nat. ord. Malvaceæ.
HIBISCUS. Botanical Register, vol. 1. *fol.* 29.

§ Azanza, DC. *Capsulæ loculi polyspermi. Semina glabra. Involucellum monophyllum multidentatum. Caules fruticosi, arborescentes.*

H. *Wrayæ;* caule fruticoso tomentoso, foliis palmatis cordatis tomentosis: lobis obovatis pinnatifidis laciniis rotundatis subcrenatis, pedunculis axillaribus bifloris foliis longioribus, involucello 15-dentato, stigmatis laciniis linearibus revolutis. *Bot. Reg.* 1840. *misc.* 149.

Staminum *tubus edentulus.* Ovarium 5-*loculare; loculis polyspermis, phragmate verticali nullo;* ovulis *angulo centrali affixis.* Petala *lilacina, acinaciformia, valdè obliqua, apiculata; latere altero rectiusculo, altero dilatato rotundato.*

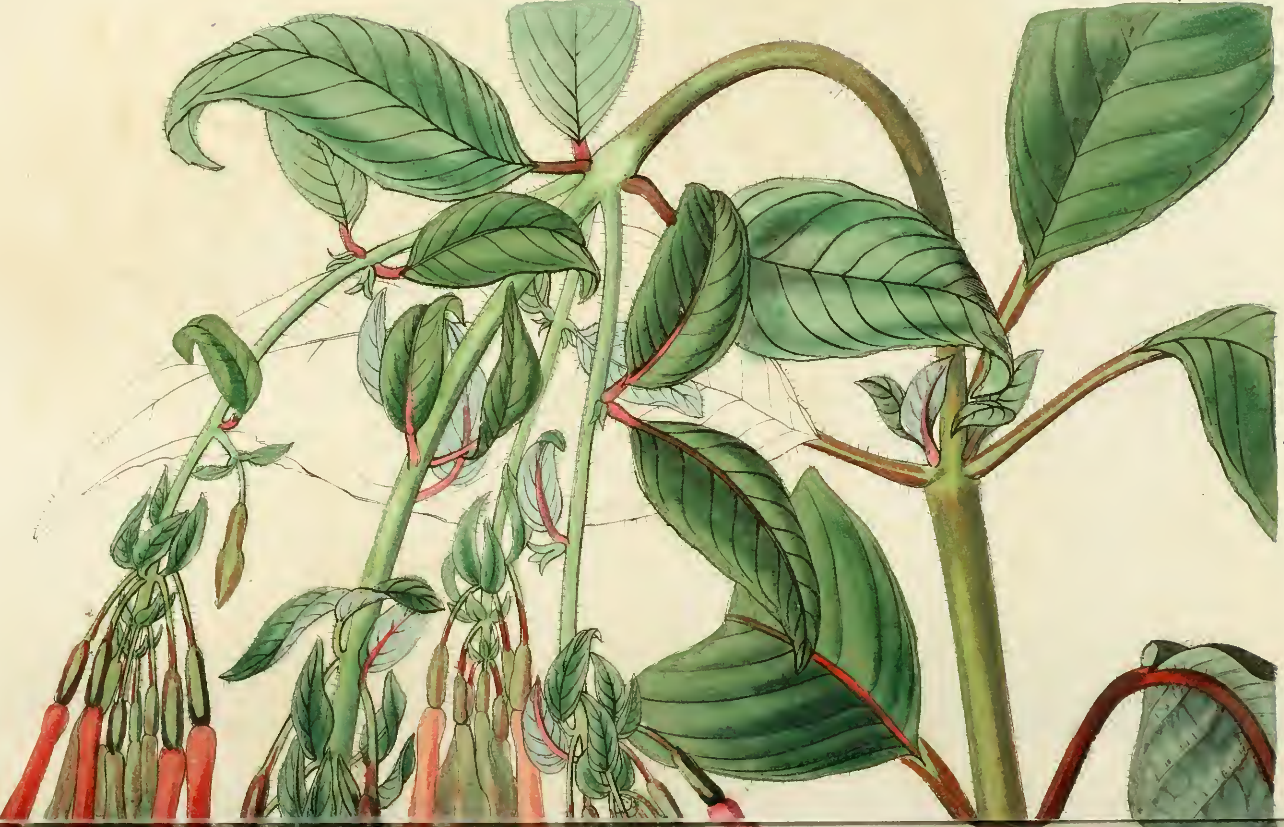
The first knowledge I had of this plant in a living state was from specimens obligingly sent from Cheltenham by Mrs. Wray, of Oakfield, a lady who has been singularly successful in raising rare and beautiful plants, and after whom this species has been named. It subsequently flowered abundantly in the Garden of the Horticultural Society, having been obtained from Swan River seeds, collected by Mr. Drummond.

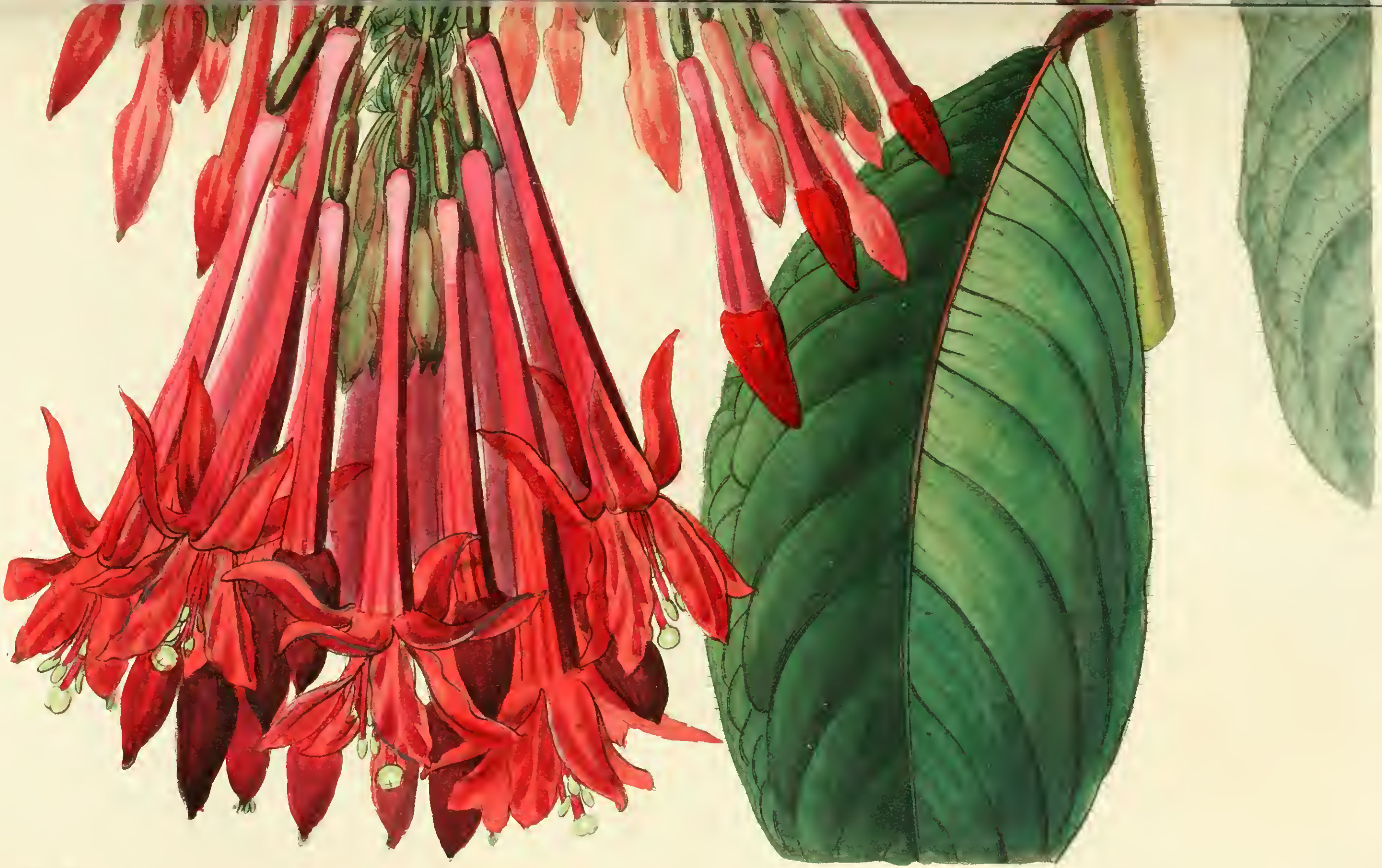
It is a greenhouse shrub of very easy cultivation, grows luxuriantly in any common soil, and attains the height of 8 or 10 feet in one season, if planted in the border of the conservatory.

The plant in the Garden of the Horticultural Society has been in flower for two months, and will continue to produce a succession of bloom throughout the winter and spring.

It is easily propagated by either cuttings or layers.

That this belongs to the section of the genus Hibiscus called *Azanza* by M. DeCandolle is evident, if its short toothed involucre and shrubby habit are considered. But *Azanza* is referred by both Endlicher and the authors of the Flora Senegambiæ to *Paritium*, a genus founded upon the *Hibiscus tiliaceus* of Linnæus, and having for its principal character a spurious vertical dissepiment in the middle of each cell of the fruit. As I have not examined the species of Hibiscus included under Azanza in DeCandolle's Prodromus, I am unable to say how far they correspond in this important circumstance; but it is quite clear from the shewing of the authors of the Flora Senegambiæ that their new sorts of Paritium are destitute of the essential character of that genus, and consequently are merely species of Hibiscus; and most assuredly that now figured, although a genuine Azanza, is equally destitute of the character of Paritium. So that Azanza must still be retained as a section of Hibiscus, notwithstanding the establishment of the genus Paritium.





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FŪCHSĬĂ corymbiflōrā.

Cluster-flowered Fuchsia.

OCTANDRIA *MONOGYNIA.*

Nat. ord. ONAGRACEÆ.
FUCHSIA. Botanical Register, vol. 15. *fol.* 1269.

F. *corymbiflora;* foliis oppositis ternisque petiolatis oblongis integerrimis tomentosis viridibus rugosis, corymbis terminalibus pendulis multifloris, calycis tubo longissimo infundibulari laciniis reflexis, petalis liberis patulis acutis staminum longitudine.
F. corymbiflora. *Fl. Peruv. v.* 3. p. 87. *t.* 325. *f. a. DeCand. Prodr.* 3. 39.

Mr. Standish, Nurseryman, Bagshot, who raised the Standish's Fuchsia, figured at plate 2 of the present volume, has had the singular good fortune to introduce this noble plant. He states that he received the seed from some relations at Montreal in Canada, who informed him that it was given them by a friend of theirs who had just come from Cusco in Peru, and who had been there for the purpose of trading, principally in saddles. It is uncertain whether this person collected the seed himself, or whether he saw it growing in some garden.

In the Flora Peruviana the present species is spoken of as acquiring the height of a man, with a stem but little inclined to branch. It was found in the woods of Chinchao and Muna, places to the north-east of Lima, in shady situations.

It is in this part of the world that the race of Fuchsias attains its greatest beauty, and developes those colours and forms which have gained for it among the Peruvians the name of Beauty-bush *(Molle Ccantu.)* Besides the subject of the present notice, several others of even finer appearance are mentioned by the authors of the Flora Peruviana, and remain among the greatest desiderata of Horticulture. *F. serratifolia* is a bush with pink flowers an inch and half long, growing in the manner of F. macrostema and its varieties. F. *denticulata* is described as twelve feet high, gorgeously beautiful when loaded with its purple flowers, still larger than those of *F. corymbiflora;* while *F. simplicicaulis* and *apetala* are similar in appearance but yet more striking.

The lover of plants will be glad to learn that this noble species is very easily managed. It strikes readily from cuttings, and the soil which suits it is a mixture of loam, peat, and sand. Though very pretty if grown in a pot, there is no doubt that it will form a much more beautiful object if stationed in the border of the conservatory. When more common, of course it will be used to plant out in the beds of the flower-garden in the same way as Fuchsia fulgens, and will probably be found to be more hardy.

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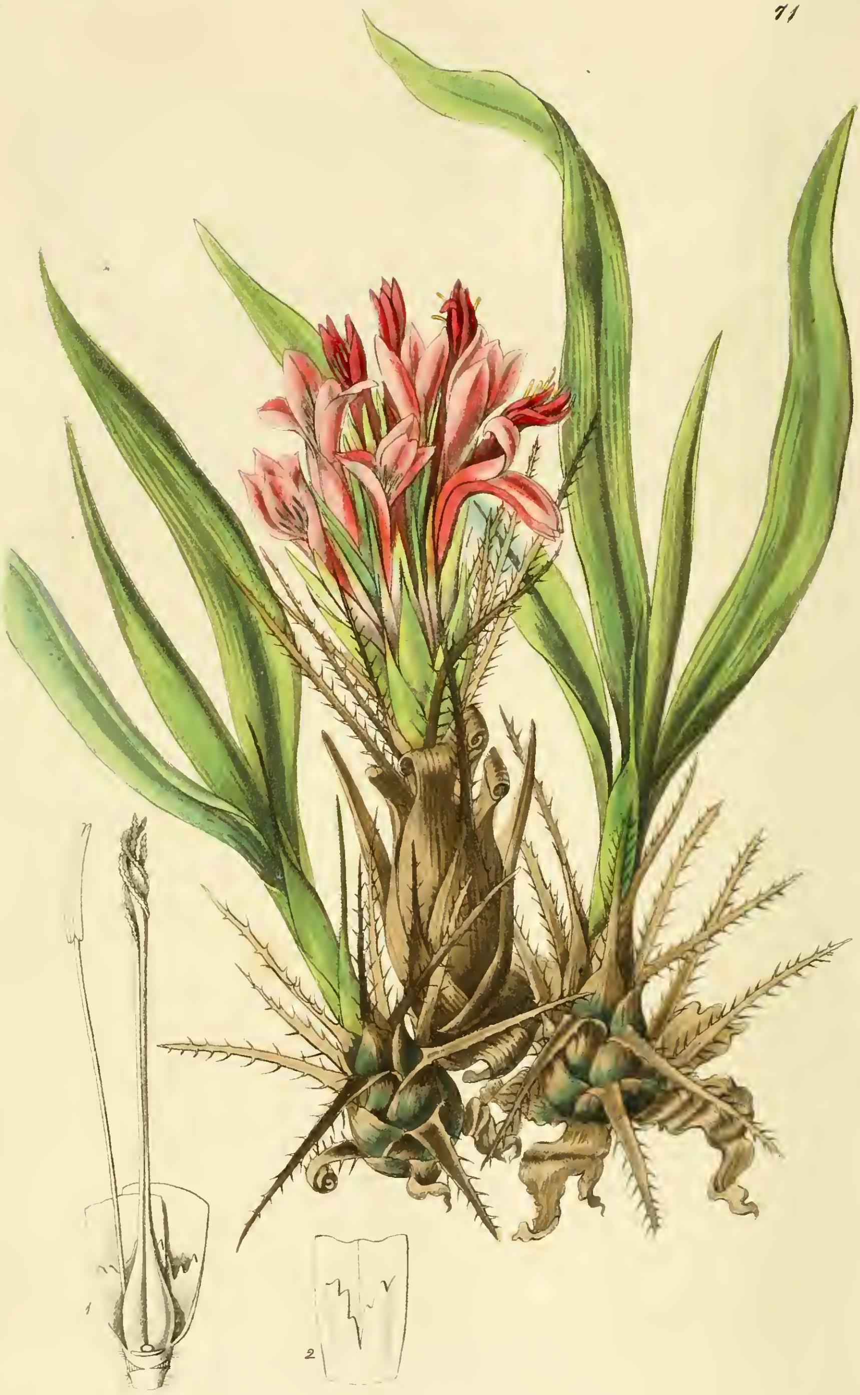

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PŪYĂ heterophy̆llă.

Various-leaved Puya.

HEXANDRIA *MONOGYNIA.*

Nat. ord. Bromeliaceæ.

PUYA. *Botanical Register,* 1840. *fol.* 11.

A. *heterophylla;* bulbosa, foliis primordialibus basi coriaceis concavis dilatatis sursùm subulatis corneis spinosis serratis; secundariis teneris lanceolatis inermibus multò longioribus parcissimè pruinosis, spicâ simplici sessili imbricatâ foliis multò breviore, bracteis lanatis calycibus brevioribus.

Sepala *lineari-lanceolata, cornea, acuminata, carinata, sublanata, petalis breviora.* Petala *carnea, ligulata, convoluta, basi squamâ duplici serratâ instructa.* Stamina 6, *basi perianthii inserta; antheris linearibus.* Ovarium *basi immersum, maximâ pro parte liberum, triangulare, pyramidatum, 3-loculare, polyspermum;* stylo *filiformi; stigmatibus convolutis.*

A very pretty plant, evidently belonging to the genus Puya, and most remarkable for bearing two kinds of leaves. Those at the base of the plant arise from tough, concave, broad, horny petioles, which overlie each other, forming a kind of bulb, and are extended into narrow, hard, serrated, spiny, brown processes about two inches long. The leaves, on the other hand, which are last formed, are thin, lanceolate, bright green, and more than eighteen inches long when full grown, and bear no resemblance to the first. The flowers are arranged in a close, oblong spike, composed of imbricated woolly cartilaginous pale green bracts, occupying the centre of a bulb of spiny leaves in the place of the thin leaves before mentioned.

I am indebted for my knowledge of it to John Rogers, Esq. Jun. of Sevenoaks, with whom it flowered in May 1840, and who has given me the following memorandum concerning its history and habits.

" I received the plant from Mr. Parkinson from Mexico, in 1838, and stuck it into a pot loosely filled with Tillandsia, in which this plant and the Epiphytes which accompanied it had been packed. It flourished so well in its temporary abode, the roots clothing the inside of the pot, that I never disturbed or planted it otherwise; and this summer it flowered for the first time. When growing it has received abundance of water; indeed I believe it stood in a pan always full. When the leaves began to turn yellow, it was set on the floor of the house and kept dry and cool for two months or more till it showed flower. It has been grown close to the light, in a stove of moderate temperature, not very damp.

"Its spiny processes are excessively sharp and brittle, rendering it almost dangerous to touch the plant; and the leaves when full grown are eighteen inches to two feet long, and flexible, hanging about more loosely than those of most similar plants."

MISCELLANEOUS NOTICES.

DEATH OF MR. ALLAN CUNNINGHAM.

It is my sad duty to commence the present year by announcing the death of this distinguished individual, the particulars of which are given as follows in the Athenæum Journal of the 14th of December, 1839:—

"Letters from Australia announce the death of Mr. Allan Cunningham, on the 27th of June last. "His health," says Capt. King, R.N., in a letter to the Secretary of the Geographical Society, "received a severe shock in New Zealand, and ever since he has been rapidly declining. Two hours before his death,—having been inaudible all day,—I told him that the Governor had received a letter from Sir Gordon Bremer, giving a favourable report of the new colony at Port Essington, when in a moment his eye glistened, and in a rapid and audible voice he said, 'Well, did they go inland?' I told him 'not far.' He then fell off again, and scarcely said any thing more. He died calmly and without a sigh." [We are indebted to a correspondent for the following particulars.]

"Mr. Cunningham was in the 48th year of his age, having passed twenty-five years in active scientific researches in Brazil, and in New Holland and the neighbouring islands. In 1814, Mr. Cunningham received the appointment of Botanical Collector to the Royal Gardens at Kew, left England in company with Mr. Bowie for Rio, having, through the influence of the late Sir Joseph Banks, obtained permission from the Portuguese government to travel into the interior. The travellers reached as far as St. Paul's, where they remained some time, and made many valuable collections, which were transmitted to the Royal Botanic Gardens at Kew. After a residence of two years in Brazil, Mr. Cunningham parted from his companion (who went to the Cape of Good Hope) and embarked on board a vessel for Sydney, where he arrived in 1817. He shortly after joined Mr. Oxley, the surveyor-general, on his expedition down the Lachlan river, and on his return he accompanied Captain Philip Parker King in his four voyages of survey on the north and north-western coasts of New Holland. In these voyages he made some interesting collections. Mr. Cunningham afterwards visited New Zealand, Van Diemen's Land, and Norfolk Island, and also took several journies through the Liverpool Plain district and the Moreton Bay country, the whole of which were equally fruitful in a botanical as well as in a geographical point of view, Mr. Cunningham being the original discoverer of the pass into the Liverpool Plains, and also connecting the Moreton Bay country with the colony of Sydney.

"In 1830 Mr. Cunningham returned to England after an absence of seventeen years, and on the unfortunate death of his brother Mr. R. Cunningham, who was killed by the natives while with Major Sir T. L. Mitchell's expedition to the Darling River, he accepted the appointment of Colonial Botanist, which his brother had held, and returned to Australia in 1837. The situation not affording him those opportunities of research that he had anticipated, he resigned it at the end of the year, and in May, 1838, embarked for New Zealand, where he remained till October, when he returned to Sydney in a very debilitated state of health, from his constant exposure to the rains of that climate during the winter season. From that time his constitution continued gradually to break up, till death relieved him of his sufferings."

In this gentleman both Geography and Botany have sustained a real loss; for he was an intelligent and most industrious traveller, and an excellent practical Botanist. How little he regarded posthumous fame is seen by the fewness of his published works, a brief sketch of the Flora of New Zealand being the only systematical account of his Botanical discoveries printed during his life; how much he has done to merit the grateful remembrance of posterity is well known to all his scientific friends. It was always a subject of extreme regret with him that the large collection of Brazilian plants made by him in the earlier part of his career should never have been either published or distributed among Botanists, but he had no control over their disposal, which rested with other persons. Of the Australian collections however, which were his private property, the use was most liberal, and many are the herbaria, the richest part of whose New Holland plants is derived from his generous assistance. In fact, the vegetation of the northern and eastern parts of this great country would have been almost as much unknown now, as it was in 1810, had it not been for Mr. Cunningham. The Australian Compositæ for example, could not have been usefully examined by M. DeCandolle in his laborious revision of that most difficult order, if the whole collection of those plants, found by my lamented friend, had not been sent to Geneva. Well might he be dissatisfied at the duties of Colonial Botanist at Sydney, alluded to in the foregoing extract from the Athenæum, when he found that, owing to the ruthless parsimony of the authorities, he was not only deprived of all means of prosecuting his researches into the Botany of the Colony, but, instead of being treated as a man of science, was placed, by the nature of his duties, upon the footing of a turnkey. If the evidence I possess upon this subject were made public, it would excite feelings of astonishment and disgust.

AWARD OF A COPLEY MEDAL TO DR. BROWN.

At the last anniversary of the Royal Society a Copley Medal was presented to Dr. Robert Brown for his original and important discoveries in vegetable anatomy and physiology; and thus has something like justice at last been done to the character of one of the most learned naturalists, and certainly the most profound botanist of our age. It must be no little gratification to the friends of science that this should have been one of the early results of a reformation in the management of the Royal Society, under the enlightened administration of the Marquess of Northampton.

The following is the official declaration of the discoveries for which the medal has been awarded: viz. "The organization of the vegetable ovule, immediately before fecundation (published in 1826); and the direct action of the pollen, manifested by the contact established between it and that point of the ovulum where the embryo subsequently first becomes visible, and published in papers, in the years 1832 and 1833, and communicated to the Linnean Society."

Dr. Ph. Fr. de Siebold Flora Japonica. Sectio primà, plantæ ornatui vel usui inservientes. Digessit Dr. J. G. Zuccarini, Fasc. I.-VIII. 1835-1839. 4to.

Of this beautiful work eight parts only have appeared in four years, from which it is to be inferred that the encouragement it meets with from the public is not of a very substantial nature. I may therefore be permitted to state somewhat at length what manner of book this is, the subscribers to which are so few, that it can hardly draw its slow length along.

In all respects it is an *ouvrage de luxe*, printed in large 4to. in Latin and French, on fine paper, with a bold handsome type, and broad margin, and illustrated with coloured plates of plants, remarkable either for their use or beauty. The figures are drawn by artists of taste and skill, are beautifully *engraved* on stone, and are coloured in a manner that leaves nothing to desire as works of art; they are accompanied in all cases by elaborate dissections of the parts of fructification, which renders them of great value as works of science. The title-page is richly embellished with a view of the tomb, erected in the island of Dezima, to the memory of Kæmpfer and Thunberg, and the dedication to the Grand Duchess of Russia is enriched with graceful arabesque tracery. It is therefore obvious that no care or cost have been withheld from the work by the publishers.

The editorial part, by Professor Zuccarini of Munich, is performed in a manner worthy of the state of modern science. In addition to the information as to synonymes, &c. usually found in works of systematical botany, there is an elaborate technical description in Latin of each species, and an account in French of its habits and uses, together with such scientific discussion as the subject calls for. The best illustration that can be given of this is by way of extract, for which purpose I give the account of the *Sii Noki* or *Quercus cuspidata*, a kind of oak with eatable acorns.

"The *Sii Noki* is found in all the islands of Japan; it grows in thickets mixed with other kinds of *Oaks*, *Chesnuts*, *Laurels*, *Wild Camellias*, *Viburnums*, and *Ilex*, especially about cottages and solitary farm-houses, on the hills and mountains, as high as a thousand feet above the level of the sea. In gardens it serves as an ornament, and its fruits, which taste like chesnuts, are eaten raw, or roasted, and are also employed as a remedy in dropsical cases. The wood is fine grained, hard, of a yellowish grey-colour, and is worked up into utensils, agricultural instruments, gun-stocks, &c. The tree bears clipping very well, on which account it is very commonly found round places of worship, and in gardens, where it is cut into the form of pyramids, globes, &c. In pleasure-gardens large plantations of it are sometimes found, in which the old French style of gardening is imitated. The trunk is usually 30 or 40 feet high, and from 10 to 18 inches in diameter. The leaves are alternate, stalked, oval, or oblong, acuminate, entire or slightly serrated, evergreen, coriaceous, smooth and green above, brownish beneath. The long slender catkins of the male and female flowers are collected into panicles at the summit of the branches. The fruits grow 15 or 20 together, in short straight spikes, and do not ripen till the autumn of the second year, that is to say, eighteen months after the appearance of the flowers; the acorns are completely covered in the cup, which eventually bursts irregularly into two or three lobes. They germinate immediately after being sown, and soon come up; nevertheless the growers prefer and carefully seek for the young suckers which spring of themselves in plantations, and they use them as stocks on which they graft what is considered the best variety. I succeeded in 1830 in conveying this and several other oaks to Europe. The Japanese manage to preserve a large sort of chesnut, as far as midsummer, by enveloping it in a kind of ferruginous loam; and this gave me the idea of sending this kind of oak to Holland, in cases filled with such earth, well pressed down. They reached their destination in excellent order, as did seeds of the Tea plant, sent in the same way to Batavia in 1825-6, which were the origin of thousands of plants, now forming vast plantations in Java. In the same way Mr. Burger has been able to enrich the Botanical Gardens of Leyden with the young oaks and Camellias of Japan. These Japan oaks. namely, Q. *cuspidata*, *glabra*, and *serrata*, sustained in the open ground, the winter of 1833-4 without injury."

In this style have now been illustrated forty plants, among which are the following:—

The *Illicium religiosum*, or *Skimi* of the Japanese, with which this people ornament their temples.

Forsythia suspensa, a beautiful yellow-flowered deciduous shrub, related to the Lilac.

Anemone cernua and *japonica,* two charming species, of which the first resembles our wild Pasque flowers, and the other looks like a Dahlia.

Of *Deutzia* three species.

Rhododendron Metternichii, an alpine species, from the north of Japan, resembling the R. maximum, but with purple flowers.

Pawlownia imperialis, a tree like a Catalpa, with large panicles of trumpet-shaped purple flowers; it is called *Kiri* in Japan, and is one of the most magnificent plants of the country.

Lilium cordifolium, a curious plant, allied to Wallich's *L. giganteum.*

Prunus Mume, a yellow-fruited Plum, used only for pickles, like our Cucumbers, and producing many hundred varieties; also employed by the Japanese for dwarfing; upon which subject is the following curious statement. "The Japanese have an incredible fondness for dwarf trees, and with reference to this the cultivation of the Mume is one of the most general and lucrative employments of the country. Such plants are increased by inarching, and by this means specimens are obtained which have the peculiar habit of the Weeping Willow. A nurseryman offered me for sale, in the year 1826, a plant in flower, which was scarcely three inches high; this *chef d'œuvre* of gardening was grown in a little lacquered box of three tiers, similar to those filled with drugs, which the Japanese carry in their belts. In the upper tier was this Mume, in the second row a little Spruce fir, and in the lowest a Bamboo, scarcely an inch and a half high."

Benthamia japonica, a new species, smaller in all its parts than the old species, and inhabiting the highest mountains of Japan.

Stachyurus præcox, a shrub referred by Professor Zuccarini to Pittosporaceæ, cultivated by the Japanese for its copious and beautiful early tails of whitish flowers.

Corylopsis spicata and *pauciflora*, hazel-like bushes, belonging to Hamamelaceæ.

Boymia rutæcarpa, a powerful stimulant purgative and sudorific medicine.

Aralia edulis, a species with roots having an agreeable aromatic and bitter taste, eaten in the winter like Scorzonera.

Schizophragma and *Platycrater*, two new genera, related to Hydrangea, and with the same habit as that genus.

Diervilla hortensis, *grandiflora*, *floribunda*, and *versicolor*, four most beautiful shrubs, with trumpet-shaped rose-coloured or white flowers, and the habit of upright Honeysuckles.

Abelia serrata, a white-flowered bush, belonging to the same natural order as the last.

Viburnum plicatum and *tomentosum*, two plants resembling our common Gueldres Rose.

The last plant as yet figured is the *Trochodendron aralioides*, an evergreen shrub, from damp shady places in the south of Japan, where it is called *Jama-Kuruma*, or Mountain-wheel, because of the verticillate arrangement of its leaves and numerous stamens; it appears to be similar in habit to our tree Ivy.

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1. HOȲĂ coriācĕă. *Botanical Register*, 1839. *t*. 18.

I find that this very rare plant is the *Cyrtoceras reflexum* of Horsfield's Plantæ Javanicæ, p. 90. t. 21. Mr. Bennett, the learned author of the genus, and of the greater part of the work in which it appears, distinguishes it from Hoya by "the great comparative elongation of the whole of its sexual apparatus, which in Hoya is as remarkably depressed. The inner angle of the foliola of the corona staminea, which in Hoya forms a mere tooth incumbent on the anthera, is produced in Cyrtoceras into an erect lanceolate process, twice as long as the anthera, and equal in length to the external horn, at the base of the foliola." It appears that mutilated specimens, "apparently of the same species, or at least of a very nearly related plant, exist among the collections of Father Camel, in the Sloanean Herbarium, (vol. 231.) in the British Museum. These were gathered in the island of Luçon." "From Dr. Horsfield's notes we learn that the Javanese name of the plant is *Kappal*, and that it grows in various localities in the eastern parts of Java, at no great distance from the sea-shore." It must not be confounded with the *Kapal Kapal* of the Philippines, which, according to Father Blanco, is the *Asclepias* or *Calotropis gigantea*; and at all events is an entirely different plant of the same natural order.

Messrs. Loddiges find the plant so difficult to multiply, that they have not yet succeeded in obtaining a duplicate.

In consequence of the great number of Botanical periodicals now publishing, in all of which there is some, and in some of which there is a considerable amount of original matter, it is my intention to incorporate in the Miscellaneous portion of this work, every thing which I can find of real or supposed novelty, so that a reference to these pages may be in fact a reference to all the current Garden Botany. In the prosecution of this task I commence with the plants now immediately following—in which the plants not actually inspected by myself are indicated by the sign ¶.

¶ 2. LISSĀNTHĒ *stellātă;* caule minutè pubescenti, foliis sparsis oblongis breviter petiolatis glaucis mucronatis, floribus albis axillaribus solitariis breviter pedunculatis unibracteatis, limbo 5-partito apice fusco. *Floral Cabinet,* III. *p.* 79.

A native of New Holland. A small shrub, with glaucous leaves, and small white flowers.

¶ 3. PASSIFLORA *hispidula;* foliis membranaceis hispidulis trilobatis ciliatis basi cordato-sinuatis subdentatis apiculatis: lobis subæqualibus obtusis apiculatis, petiolis hispidis infra medium biglandulosis, pedicellis geminis brevissimis 2-3-bracteatis, ovario elliptico glabro. *Floral Cabinet,* III. 126.

Mexico? (country not stated). Flowers small, but "exceedingly pretty," yellowish white, with purple rays.

4. ĔRĬĂ planicaūlĭs (*Wallich*); caule compresso folioso erecto, foliis coriaceis aveniis obtusis emarginatisque, floribus glabris intra bracteas siccas striatas subsessilibus, labello reniformi supra unguem bicalloso, petalis linearibus sepalis ovatis acutis multò angustioribus.

Upon this plant Mr. Booth has favoured me with the following communication:—

"This singular species was forwarded by Dr. Wallich from the Honourable East India Company's Botanic Garden, Calcutta, in 1838, and added to Sir Charles Lemon's collection at Carclew, where it flowered during the autumn of 1839. It has nothing to recommend it to the notice of cultivators, but to the Botanist it is a highly curious and interesting subject. It requires the constant heat of the stove, and seems to thrive pretty well in a pot of finely chopped moss and decomposed vegetable earth.

"*Stem* erect, fleshy and compressed, of a deep yellowish green, widening from the root upwards, where it forms a kind of flat pseudo-bulb, partly covered by the sheathing appendage to the leaves, and, at the base, by the imbricated, sheathing, ovate-acuminate, deep brown, persistent scales. *Leaves* three or four near the top, distichous, alternate, nearly erect, of a deep shining green, ovate oblong with a round emarginate point, comparatively thin and rigid, varying from three to five inches long, and about an inch broad, twisted near the base. *Flowers* very small and numerous, cream-coloured, produced in a recurved massy cluster at the extremity of the stem, nearly concentrated by the brown scales and bracteas in which they are enveloped. *Pedicells* short and round, pale green, slightly channelled, bearing two flowers on each. *Sepals* very thin, ovate-acuminate, nearly all of the same form and size, but the two lateral ones are more oblique and surround the spur-looking end of the labellum, whilst the upper one extends over and embraces the column. *Petals* very small, linear, spreading and recurved. *Labellum* concave, reniform, slightly undulated at the margin with two deep yellow processes or glands near the centre, from which it diminishes to a narrow claw that connects it with the end of the column, and gives it the appearance of being spurred. *Column* very short and nearly round, with a fleshy projection at its base. *Anthers* roundish cordate, apparently two-celled. *Pollen masses* 8, ovate, pointed, deep yellow."

5. SACCOLĂBĬŪM *compressum;* caule juniore ancipiti, foliis distichis amplexicaulibus undulatis obtusis obliquè 3-dentatis, racemis cylindraceis pendulis, labelli calcare falcato obtuso laminâ carnosâ minimâ dentiformi sepalisque triplò longiore.

A fine Manilla plant imported by Messrs. Loddiges. The flowers are in drooping cylindrical racemes, with small sepals blotched with crimson, and a long ivory-white spur. A figure of it is preparing for the 7th No. of the Sertum Orchidaceum.

6. CYMBĬDĬŪM *mădĭdūm;* foliis ensiformibus basi canaliculatis, racemis pendulis, sepalis ovalibus obtusis apiculatis patulis, petalis conformibus erectis, labello nudo per medium madescente oblongo: lobis lateralibus minimis intermedio oblongo obtuso basi paululùm angustato.

A new species of East Indian Cymbidium imported by Messrs. Rollissons. The leaves are like those of C. sinense; the flowers are a dull yellowish olive green, with sepals about half an inch long; the labellum is yellower, with a deep purple stain inside, and is altogether destitute of the lamellæ so usual in this genus; in room of which there is a shining exudation all along the axis. I did not remark any smell in this species.

7. DENDRŌBĬŪM *plicătĭlĕ* (D. *fimbriatum,* Lindl. gen. & sp. pl. p. 76.)

This plant has flowered with Messrs. Rollissons, imported from Manilla. It has solitary, rather large flowers, of a dull yellow a little tinged with red, and a curious plaited labellum. The original name of this plant being the same as that applied to a very different species, it has become necessary to substitute another, which I have taken in allusion to the very conspicuous plicatures of the labellum.

8. CYCNŌCHĒS *maculātūm;* racemo longissimo multifloro, labello lineari-lanceolato, hypochilio lineari, metachilio basi cornuto glandulis utrinque teretibus elongatis genuflexis pinnatifidè marginato, epichilio lanceolato membranaceo acuto margine incurvo.

A very fine species, with long, pendulous, many-flowered racemes of dull yellowish-brown flowers spotted with brown. It has lately flowered in Mr. Barker's invaluable collection of epiphytes, and will be immediately published in the Sertum Orchidaceum; the page of the Botanical Register is too small to do justice to so noble a flower.

9. MORMŌDĒS *buccinātŏr;* sepalis lineari-oblongis lateralibus reflexis dorsali petalisque ovali-lanceolatis erectis, labello unguiculato carnoso nudo subrotundo-cuneato apiculato utrinque emarginato lateribus in buccinæ formam revolutis, columnæ dorso acuto.

Flowers pale green, with an ivory-white lip, whose sides are so rolled back as to give it the appearance of a trumpet. The column is twisted sometimes to the right, sometimes to the left. The habit and general appearance of the flowers, except in colour, is that of *M. atropurpurea*, figured in the Botanical Register, t. 1861. Specimens were sent me by Mr. Thomas Williams, gardener to J. Willmore, Esq. of Oldford, near Birmingham.

10. AZĀRĂ *integrifŏlĭă.* Flora Peruviana syst. p. 138.

A few weeks ago I received a flowering specimen of this rare plant from Messrs. Lucombe, Pince, & Co. Nurserymen, Exeter, who cultivate it successfully against a western wall. It is a handsome evergreen with very dark leaves, and would be well worth a place in a garden where such shelter can be afforded it.

¶ 11. ŌXĂLĬS *Darvalliānă;* radice tuberosâ repente: foliolis ternis latè linearibus sparsè hirsutis, marginibus glanduloso-punctatis emarginatis; floribus solitariis albidis margine pallidè coccineis; stylis longissimis glanduloso-hirsutis. *Knowles & Westcott, Floral Cabinet, t.* 93.

A delicate (greenhouse ?) plant, with white petals bordered with crimson, but a shy flowerer. It is said to approach very near to O. versicolor, from which it differs in having broader leaflets, *surrounded* with glandular dots. Its native country is not mentioned.

¶ 12. SISYRĪNCHĬŪM *jūncĕūm;* caule simplici cylindraceo sulcato monophyllo; folio fistuloso, spathâ longissimâ, floribus stipitatis numerosis incarnatis, pedunculis longissimis, filamentis connatis in medio inflatis; ovariis subglobosis hirsutis. *Knowles & Westcott, Floral Cabinet, t.* 95.

A very pretty little herbaceous plant, with rushy leaves and numerous flesh-coloured flowers issuing in long-stalked umbels from the common spathe. It is said to remain in flower two months.—It is probably common in Chile, whence wild specimens are not unfrequently sent to England.

¶ 13. LISSĀNTHĒ *stellātă;* caule minutè pubescenti, foliis sparsis oblongis breviter petiolatis glaucis mucronatis, floribus albis axillaribus solitariis breviter pedunculatis unibraceatis, limbo 5-partito apice fusco. *Knowles & Westcott, Floral Cabinet, vol.* 3. *appendix, p.* 79, with a description.

A species more singular and neat than handsome. Its flowers are white, quickly becoming withered and brown when removed from the stem.

¶ 14. LĂTHŸRŬS *Armitageānŭs;* suffruticosus, ramosus, glaucus, foliis unijugis, foliolis ovatis sessilibus mucronatis venosis marginibus cartilagineis, stipulis sagittiformibus venosis foliolis æqualibus vel latioribus, floribus pedunculatis racemosis cœruleis pedunculis foliis coæqualibus, cirrhis foliis longioribus ramosis. *Knowles & Westcott, Floral Cabinet, t.* 110.

This is one of the beautiful species of our European genus Lathyrus, found in the temperate parts of South America, and for the most part only known in herbaria. The flowers are large, numerous, and bright bluish lilac. It is a half-hardy shrub, native of South Brazil.

¶ 15. LINARIA *delphinoīdēs;* caule gracili ramosissimo glabro, foliis alternis subulatis, floribus racemosis purpureis striatis calcaribus arcuatis longissimis, pedunculis et calycibus pilosis, corollæ lobis superioribus obtusis inferioribus emarginatis, calycibus reflexis. *Knowles & Westcott, Floral Cabinet, t.* 115.

A biennial? plant, with showy deep purple flowers; introduced from the St. Petersburgh Garden under the above name. It produces seeds, and is easily multiplied by cuttings.—Seems very near *L. bipartita.*

¶ 16. PASSIFLŌRĂ *hispĭdŭlă;* foliis membranaceis hispidulis trilobatis ciliatis basi cordato-sinuatis subdentatis apiculatis; lobis subæqualibus obtusis apiculatis, petiolis hispidis infrà medium biglandulosis, pedicellis geminis brevissimis 2-3-bracteatis, ovario elliptico glabro. *Knowles & Westcott, Floral Cabinet, append.* iii. 126.

Said to be a small-flowered but very pretty plant; the calyx whitish inside, the petals yellowish white, the crown spotted with purple. Nothing is said of its habits, or of the country it is found wild in: but as it was imported by Mr. Barker it is probably Mexican.

¶ 17. LOBĔLĬĂ *multiflōră;* caule erecto herbaceo basi ramoso, foliis ovato-oblongis subacuminatis hispidulis obsoletè dentato-glandulosis ciliatis sessilibus, spicâ elongatâ terminali multiflorâ foliatâ. *Knowles & Westcott, Floral Cabinet, vol.* iii. *append. p.* 126.

Neither the colour of the flowers, nor the stature or habits of this plant, nor the country from which it was introduced, are stated.

DISTINCTION BETWEEN THE GENERA HYMENOCALLIS AND PANCRATIUM.

In the recent Appendix to the Botanical Register, I have regarded Mr. Herbert's genus *Hymenocallis* as not being distinct from *Pancratium.* Upon this subject I have received the following note from Mr. Herbert.

"I think you have not fully attended to the difference between those two genera. The first has the ovules flat, cumulative, horizontal, attached to the axis. The second oblong, subcylindrical, erect, attached to or near the base. The first has a separable black shell, and an albuminous kernel within the inner coat; the latter has no separable shell at all, but the embryo naked in a cavity within. The anthers and pollen are as different as the seed. The former native of the old continent and impatient of wet; the second of the new, and liking submersion. I see no analogy at all in the seeds of Iris, to which you call my attention, as differing from each other in the same way. The difference, *there,* is no more than occurs between Hippeastrum reticulatum and vittatum. Iris seeds have two separable coats. In some there is a vacuum or cavity between them ; in fœtida that cavity is filled with pulp, and in others it is more or less filled, but the inner coated kernel is alike in all ; and the difference is merely the absorption of the intermediate pulp. The outer coat of the seed of Iris fœtida is easy separable from the pulp."

CLESTINES.

Professor Morren has given this name to those well-known large cells of cellular tissue in which raphides, or acicular crystals, are deposited in plants. He finds that in *Musa paradisiaca* the clestine is produced among oval tissue of the divisions of the air cells in the leaves of that plant, and that for a long time after the appearance of crystals in the inside, it preserves its oval figure. So long as it remains attached by a single point to the cells of this partition it retains that form, but by degrees the surrounding tissue alters into *actinenchyma,* or starry tissue, and then its adhesion to the cells from which it receives its food takes place at several different points ; whereupon in augmenting in size and gaining a much greater capacity than the surrounding actinenchyma, it attaches itself to the rays of the latter by legs or peculiar extensions, which may amount to the number 8 or 10. But if it is formed at the borders of the prismatical tissue of the partitions, it acquires the form of a cylinder with two beaks. He regards clestines as analogous to the *biforines* observed by Turpin in a few Araceous plants, but differing in not possessing the apertures required for the ejaculation of their contents under the influence of endosmosis : *Observations sur l'Anatomie des Musa,* in the *Bulletin. de l'Ac. R. de Bruxelles,VI.* no. 3.

Recensio specierum generis Pteridis, auctore Jac. G. Agardh, Lundæ, 1839, 8vo.

In a pamphlet of 86 pages Dr. James Agardh has given an arrangement, with their specific characters, synonyms, and history, of the great and difficult genus *Pteris,* the species of which, after eliminating such as are now referred to other genera, amount in number to 94, the distinctions of which are certain; besides these there are 29 which the author has not seen, and which are doubtless in some cases synonyms of others.

A work more grateful than this to systematic botanists could hardly have been undertaken; for if there was one genus more difficult than another among Ferns it was certainly Pteris. The author's great object has been to elucidate the synonymy, and he appears to have done so with much skill and success, as may be seen from the result of his enquiries into a few cases. P. angusta, elastica, and mascarenensis are the same as *P. scabra;* P. arguta, palustris, and lata belong to *P. flabellata;* and, finally, P. discolor, glaucescens, cruciata, sinuata, Lessoniana, and vespertilionis, and perhaps P. pallida, are referred to *P. elegans.* So that no fewer than *sixteen* are reduced to *three.* It is probable that few large genera exist, upon which numerous botanists have worked independently, in which similar reductions of species might not safely be made; and if so, what opinion is the statistical enquirer to form of the actual number of Vegetable species known to science?

FRUIT OF LEPTOTES BICOLOR, AROMATIC.

Professor Morren has ascertained that the fruit of this pretty epiphyte, figured in the present work, vol. 19, t. 1625, is fragrant when ripe. By fertilizing it artificially, he succeeded in twice obtaining its fruit, which he describes as resembling in smell the well-known Tonka or Tonquin bean of the perfumers; or the Sweet-vernal Grass (Anthoxanthum odoratum), which aromatises hay, only stronger and more penetrating than the last. It has been found that this fruit, infused in cream or milk, gives them, when iced, a mild agreeable flavour, sweeter than Vanilla but less penetrating. "L'homme," adds the author, "est avide de variétés dans sa nourriture; l'art culinaire trouve içi un moyen de plus de contenter ses goûts capricieux, et l'art du glacier de diminuer, chez ses produits, cet ennui qui, dit-on, naquit de l'uniformité."

ON THE MOTION OF GUM IN PLANTS.

In his investigation of the anatomy of Cycadaceæ, Professor Morren has arrived at a fact of great interest in Vegetable physiology. It is well known that all these plants yield an abundance of gum, which flows from them freely in a liquid state when wounded; the author ascertained the correctness of Professor Meyen's statement, that the flow of such matter takes place in special channels, i. e. in long fistulæ, whose walls are built up of cellular tissue. It is usually supposed that gum is a secretion from the leaves of plants, and that it consequently flows from above downwards; it has been even compared to the blood, and regarded as the most pure, and most essential part of their nutritive matter. Professor Morren has however proved by some well conducted experiments, that in Cycadaceæ at least the gum moves from below upwards, and that it arises in the stem, whence it mounts into the leaves. The author therefore suspected that gum is an ulterior elaboration of the starch lodged in the trunk, and that such elaboration is excited, or brought about, or at least assisted, by some acid, probably supplied by the leaves themselves to the trunk; a suspicion eventually confirmed by chemical investigation.

M. de Coninck, Professor of Chemistry at Liége, analysed the leaves of *Cycas revoluta*, and ascertained that they contained, 1° Chlorohydric acid, probably combined with soda or potash; 2° Oxalic acid, probably free; and 3° Oxalate of lime, forming the principal part of the solid exterior layer of the leaves; a very interesting fact, inasmuch as superficial indurations of plants have always hitherto been ascribed to the presence of silex. From these facts M. Morren concludes that in Cycadaceæ gum is formed at the expense of the starch of the stem, and that such a change is effected by the action of the free oxalic acid secreted in the leaves.

We are, therefore, to understand hereafter that gum is a form of the nutritive matter of plants; that, instead of being the result of vegetable digestion, it is a principle created by nature for their crude food; that one at least, if not the principal of the functional purposes for which starch is universally dispersed through the tissue of plants, is in order that it may be every where ready for conversion into gum; and finally that it is in the form of gum that starch passes through the sides of the tissue in which its granules were originally generated. *Expériences et Observations sur la gomme des Cycadées* in the *Bulletin de l'Academie royale de Bruxelles, VI. no.* 8.

Extract from a letter from Ronald Gunn, Esq. to Dr. Lindley.

"Hobarton, Van Diemen's Land, 23d Sept. 1839.

"My dear Sir,—Your letter of the 23rd February last, with your 'Observations on the effect of Frost on Plants,' only reached me yesterday, and I now hasten to acknowledge their receipt. Your observations on Frost are highly interesting, and I cannot do better than at once communicate to you such remarks as a perusal of it has called forth, as far as relates to the Plants of Australia. I find that all the Plants of Van Diemen's Land, with one or two exceptions, appear to have resisted the cold, although the majority of Australian plants did not; but that is hardly to be wondered at when they are principally found near the sea in lat. 34°.

"*Acacia.* Of this genus A. affinis and diffusa will, I think, always be found hardy, also probably melanoxylon, although the latter usually grows in shaded umbrageous ravines, and therefore in its natural state is protected from all frosts until very old. The fate of A. verticillata astonishes me, as I consider it a decidedly hardy species. A. sophora grows in the *sands* by the *sea shore* and *there only*, and I find will not stand well in gardens here, principally from the impossibility of providing it with a suitable soil. I found the frosts at Launceston, affected the young branches in my garden. I am not aware of any other of the species being indigenous to Van Diemen's Land.

"*Aster argophyllus* is only found in very damp shaded warm ravines, where it is, in its oldest state, sheltered by the large Eucalypti. It is our tenderest shrubby aster, and the young shoots were injured by the frost every winter, in the late Mr. Robert Lawrence's garden at Launceston, where exposed. You will find A. viscarius, and indeed almost every species hardy, except argophyllus and another, which is only found on sandhills near the sea.

"*Banksia.* No species in your list belong to Van Diemen's Land.

"*Billardiera longifolia* is not our's either, but I think some of our species would be found hardy. B. longiflora, it is true, usually grows in thickets, twining round shrubs, so that it is never exposed to frost in its natural state.

"*Correa alba* only exists here on the sandhills and rocks within a few yards of the sea, and is not found inland any-where. On our coasts therefore it is necessarily exposed to such slight frosts, that I should not be astonished at its proving tender; as also C. speciosa and Backhousiana. C. ferruginea, virens, and Lawrenceana will be found much more hardy.

" *Callistemon lanceolatus* is not of Van Diemen's Land, but our two species, viz. C. salignum and another will be found hardy.

" *Dianella cœrulea* (I doubt if either of ours is the true cœrulea) here seldom bears many leaves at any time, indeed seldom but one or two, and is inconspicuous, except in the flowering season; it grows in sand near the sea; another is found only in sheltered spots in rich soil, and where frosts could not injure it.

" *Eucalyptus.* If E. alpina is what I suppose it to be, it should be very hardy, but I am uncertain of the species. E. globulus, which is a common tree in the southern parts of Van Diemen's Land, does not exist in the northern half of the island, and some plants I grew from seed at Launceston were injured by the frost when young; the leaves of that species when young appearing to be peculiarly tender.

" *Goodia lotifolia* is tender in Van Diemen's Land, and only grows pretty near the sea, and where warm.

" *Leptospermum lanigerum* is the only species I know as belonging to Van Diemen's Land in your list. Some of ours will be found hardy.

" *Melaleuca.* None in your list are of Van Diemen's Land, but ericifolia, which should be hardy. M. squarrosa will also be found hardy I think.

" *Pomaderris elliptica* is only found bordering on the sea, or on the margins of rivers flowing into it. It is more tender than P. apetala.

" *Veronica decussata* cannot be of Van Diemen's Land. Of the suffrutescent kinds we only possess three, viz. V. formosa, labiata, and another. V. formosa will be found hardy, but labiata rather tender.

" By this it would appear that our Tasmannian plants are confounded with the Australian generally, although I think in most cases they would really be found perfectly hardy. I unfortunately do not possess the names to all my plants, or else my remarks could be rendered much more valuable. I think, however, that on reference you will find all the plants proved to be tender are from New South Wales, about 34° S. and that few of those of Tasmannia suffered, except such as naturally grow in sand on the sea coast, and under the influence at all times of the sea air. Of the genera Beaufortia, Carmichaelia, Doryanthes, Eugenia, &c. we do not possess to my knowledge a single species. I am therefore anxious that in all future times you should separate the plants of Van Diemen's Land from those of Australia, as under the latter name plants from the tropics to about 38° may be included, whereas under Van Diemen's Land you can only include from about latitude 40° 40′ S. to 43° 35′; and as our mountains attain an altitude of 4000 feet, we ought to lay claim to a separate nook in the geography of plants. By adopting the name of TASMANNIA for our island, you would avoid the confusion of Sprengel, DeCandolle, &c. where Insula Van Diemen, Terra Van Diemen, Caput Van Diemen, &c. would lead persons to believe they were separate places; as although there is a Van Diemen's Land near the Gulph of Carpentaria, I think few, if any, of its plants are described, except under the name of Australia, under which name also so many of ours are swallowed up. I am most anxious to claim for ourselves a *distinct* portion of the globe, and not be *lost* in the name New Holland. We are small, it is true; but as the most southern British settlement, and from our insular character, I think I do not claim too much in wishing our natural history to be kept by itself; although it assimilates necessarily with the south coast of the great continent, yet our possessing among the animals the Cynocephalus, and some other things peculiar to ourselves, gives us a stronger claim than our apparent insignificance on a map would lead the great people in the old world to accord to us."

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18. SOPHRONĪTĬS *violācĕă;* pseudobulbo ovali, folio solitario lineari scapo terminali basi vaginato 1-floro longiore, labello obovato acuto nudo basi gibboso, columnæ alis maximis carnosis obtusis falcatis.

A pretty little epiphyte with solitary violet flowers, for which I am indebted to Mrs. Cannon, of Stratford Green, in whose hothouse it flowered in the beginning of February. It is destitute of the brick red colour found in the other species of this genus.

¶ 19. CATASĒTŪM *Russelliānūm;* pseudobulbo elliptico magno, foliis lato-lanceolatis, racemo amplo, labello submembranaceo anticè inflato ore contracto margine anteriore producto undulato fimbriato disco membranâ cristato, columnâ nudá (ecirrhosâ). *Hooker in Bot. Mag. t.* 3777.

A large species with green flowers, a little relieved by the greater whiteness of the labellum; sent from Guatemala by Mr. Skinner to the late Duke of Bedford. The labellum is described by Sir W. Hooker as being almost membranous. It is very near *Catasetum laminatum*, a Mexican species.

20. EPIDĒNDRŪM *falcātūm.* Lindley in Taylor's Annals of Natural History, Feb. 1840. *(E. Parkinsonianum,* Hooker in Bot. Mag. Feb. 1840. t. 3778.)

A very fine species of the caulescent tribe of this extensive genus, with fleshy branching short stems, long channelled falcate leaves, and large yellow flowers, springing from within a long pale yellowish-green membranous spathe. In Sir Wm. Hooker's figure only two flowers are represented, but in my wild specimens there are four or more to each spathe. The latter were found by Mr. Hartweg among rocks and loose stones, at the Hacienda de Santa Ana, in the neighbourhood of Oaxaca, flowering in May. The plant is not very uncommon in collections of Mexican epiphytes.

21. ONCĪDĬŪM *Insleāyī* (Barker in litt.); pseudo-bulbis ovatis compressis diphyllis, foliis erectis coriaceis oblongo-ensiformibus subundulatis apice recurvis racemo simplici erecto rigido brevioribus, sepalis petalisque oblongis subæqualibus undulatis infimis basi connatis, labello obovato retuso basi sagittato disci tuberculo apice depresso dilatato bilobo utrinque in medio unidentato lamellâque unicâ retrofractâ aucto, columnæ alis cirrhatis.

This beautiful Oncidium is a native of Mexico, whence it was imported by George Barker, Esq., of Birmingham, who has named it after Mr. Insleay, his gardener. It has flowers similar in size, colour, and spotting, to those of O. Papilio, but their form is quite different, and they are produced upon a stiff erect spike. It is among the finest of the genus, and will form one of the plates in Mr. Bateman's magnificent work on the Orchidaceæ of Mexico and Guatemala.

22. BROUGHTŌNĬĂ *aūrĕă;* sepalis linearibus acutis, petalis conformibus, labello ovato convoluto acuminato.

A native of Mexico, in the neighbourhood of Valladolid, whence it was obtained by Mr. Barker.— The flowers are a bright yellowish red colour, like those of *Epidendrum vitellinum*, rather larger than in *Broughtonia sanguinea*, and scentless.

23. OBERŌNĬĂ *cylīndrĭcă;* spicâ densâ cylindraceâ, bracteis canaliculatis subciliatis, sepalis petalisque reflexis intùs labelloque cordato truncato fimbriato pubescentibus.

A most curious little species of this strange genus of epiphytes; imported from Manilla by Messrs. Loddiges. Its flowers are small, green, very densely arranged in a perfectly cylindrical spike about three inches long; each flower appears to consist of a labellum only, the sepals and petals being so closely turned back as to be unobserved until carefully looked for. The minute flowers are beautiful microscopical objects.

24. BRASAVŌLĂ *venōsă;* folio lanceolato semicylindraceo supra canaliculato, sepalis petalisque linearibus, labelli ungue longo complicato laminâ subrotundo-ovatâ subtrilobâ acuminatâ basi serratâ: venis elevatis.

A fine species resembling *B. nodosa* in habit, but with much larger flowers, the sepals being more than two inches long. The lip is white, the other parts greenish. It is at once distinguished from *B. nodosa* and all the allied species by the firmness of the lip, which is more or less evidently lobed at the side, and has the veins distinctly elevated. The flowers are deliciously sweet at night. Messrs. Loddiges imported it from Honduras.

25. LÆLĬĂ *rubēscens;* pseudo-bulbis subrotundis compressis utrinque angulo elevato, foliis oblongis obtusis scapo tereti vaginato brevioribus, racemo multifloro, bracteis pubescentibus ovario plus duplò brevioribus, sepalis linearibus, petalis lanceolatis subundulatis, labello conformi auriculato medio pubescente: lineis duabus elevatis.

For a specimen of this pretty new species I am indebted to Mr. Barker, who purchased it some time ago from Mr. Joseph Knight, Nurseryman, in the King's Road. Its native country is unknown, but is probably Mexico. It forms a patch of roundish compressed pseudo-bulbs, looking like those of a Maxillaria, and bearing each a single broad leaf, much shorter than the slender terminal scape. The latter is about a foot long, and bears at its extremity a loose raceme of delicate whitish flowers tinged with pink, and about the size of those of *L. albida*. The two first flowers which opened with Mr. Barker exhibited a singularly monstrous structure, with only two sepals and two petals, the lip and one of the sepals being missing; all the other parts were in the usual state.

26. LISSĀNTHĒ *verticillātă.* Lindl. in Append. Bot. Reg. Swan River. no. 102.

A plant of this very rare species has flowered in the garden of the Horticultural Society in one of the greenhouses. Its blossoms are of no beauty, being very small, and dull purple; but the foliage is of a brilliant green, beautifully streaked with fine veins, and the manner of growth is exceedingly graceful, resembling that of an Araucaria, or some such plant, more than any thing I can compare it with. It is certainly in point of foliage one of the prettiest plants lately introduced.

27. MANGLĒSĬĂ *glabrātă.* Lindl. in Append. Bot. Reg. Swan River, no. 183.

This plant has found its way into gardens, having been raised from Swan River seed by Robert Mangles, Esq. of Sunning Hill. It is a Proteaceous plant, allied to Grevillea, with neat toothed long-stalked leaves, and very small white flowers of no beauty. It is for its foliage alone that it will be cultivated.

¶ 28. STANHŌPĔĂ *maculōsă;* hypochilio rotundato saccato intùs verrucis glandulosis anticè obsito, metachilio brevi constricto cornua 2 falcata porrecta gerente, epichilio oblongo obtusè 3-dentato apice subreflexo. *Knowles & Westcott, Floral Cabinet, t.* 121.

A fine plant, imported (from Mexico ?) by Mr. Barker. It is said to resemble *S. tigrina* in several points, but to differ in the much smaller size of the flowers, in its general markings, in the warty, not lamellated, inner surface of the hypochilium, &c. "The inner surface of the hypochilium, although not broken up into lamellæ, has the warts arranged in a radiated manner."

¶ 29. CHEIRĀNTHŬS *ochroleūcŭs;* suffruticosus, adpressis pilis vestitus, foliis linearibus, floribus ochroleucis capitatis breviter pedicellatis, petalis subrotundis: unguibus longissimis, stigmate bilobato. *Knowles & Westcott, Floral Cabinet, t.* 120.

A dwarf hardy herbaceous plant, with soft yellow flowers and delicate scent, blossoming in June and July.——It is very different from the plant called *Ch. ochroleucus* by DeCandolle, and seems near, if not the same as, *Ch. alpinus.*

¶ 30. VERŌNĬCĂ *diosmæfŏlĭă*? Knowles & Westcott, Floral Cabinet, t. 106.

A beautiful little shrub, from Van Diemen's Land, nearly hardy, with small sweet box-like leaves, and numerous clusters of blue flowers. It flowered in the Birmingham Botanic garden, and was not killed, although in an exposed situation, in the severe winter of 1837-8.—This plant is the *D. formosa* R. Br. and not the *V. diosmifolia* of Cunningham.

¶ 31. HIBĪSCŬS *Camerōnī*; fruticosus foliosus pubescens, foliis quinquepartitis, partibus dentatis, petalis ovatis obtusis marginibus undulatis, involucellis minutis. *Knowles & Westcott, Floral Cabinet, t.* 97.

This belongs to the frutescent division of the sixth section (*Abelmoschus*) of DeCandolle. Flowers dull buff, tinted with rose, handsome. Native of Madagascar, and therefore of course a stove plant.

¶ 32. CROTALĀRĬĂ *undulātă*; suffruticosa sericeo-pubescens, foliis brevitèr petiolatis ovato-lanceolatis undulatis mucronatis, stipulis subulatis petiolis longioribus decurrentibus, floribus magnis luteis, calycis segmentis superioribus inferioribus multo majoribus. *Knowles & Westcott, Floral Cabinet, v.* 2. 158.

A showy species allied to C. rubiginosa, with large bright yellow flowers. It is a greenhouse shrub, and was imported from Mexico by Mr. Barker.

¶ 33. PERISTĔRĬĂ *guttātă*; scapo brevi pendulo multifloro, racemo denso secundo, labelli dimidio inferiore disco crasso concavo lobis lateralibus vix conspicuis: superiore ovato margine denticulato apice integro abruptè incurvo intùs tuberculis minutissimis obsito, columnâ apterâ. *Knowles & Westcott, Floral Cabinet, t.* 70.

A beautiful plant allied to P. pendula, "from which it differs in the colour, the shape, and the smaller size of the flowers, in the absence of wings from the column, and in the scarcely developed lateral lobes of the labellum. It is much more nearly allied to the *P. cerina* of the Botanical Register, with which it agrees in the general shape of the flowers, and the denticulated margin of the middle lobe of the labellum, but differs from it in the colour and copious markings of the flower, in the entire not emarginate point of the middle lobe, and in the absence of distinct lateral lobes. Still however the resemblance between them, except in colour, is so great that we question whether our plant may not eventually be considered merely a spotted variety of P. cerina." Said to have been imported from Rio Janeiro—but this is doubtful. It flowered with Mr. Barker.

¶ 34. SOLĀNŪM *Rōssĭī*; caule fruticoso prostrato tereti gracili racemoso aculeis compressis armato, foliis binis vel ternis inæqualibus pubescentibus breviter petiolatis costis suprà aculeatis basi inæqualibus imis oblongo-sinuatis superioribus cordatis subobtusis, floribus quadrifidis tetrandris ternis longè pedicellatis, antheris æqualibus. *Knowles & Westcott, Floral Cabinet, v.* 2. *p.* 141.

A Mexican greenhouse shrub, with pale blue flowers; "the upper part clothed with fulvous pubescence, prickly throughout, remarkably compressed, of a reddish-brown colour, and slightly recurved."

¶ 35. EPIDĒNDRŪM *crispātūm;* pseudo-bulbis ovatis diphyllis, foliis lineari-lanceolatis carnosis obtusis submucronatis, scapo multifloro, petalis et sepalis linearibus striatis, petalis sepalis minoribus, labello tripartito laciniis lateralibus columnam involventibus intermediâ elongatâ crispatâ (duplò longiore), ovario varicoso. *Knowles & Westcott, Floral Cabinet, v.* 2. *p.* 79.

Imported from Mexico by Mr. Barker. "The contrast between the long crisped white labellum, and sepals and petals, is very pleasing and striking." It is one of the many species of the Encyclia division of the genus, all of which require a careful comparison with each other. It must be very near E. pictum, *Bot. Reg. misc.* 1838. *no.* 42.

¶ 36. WEINMĀNNĬĂ *venōsă;* foliis coriaceis sessilibus decussatis oblongo-ovatis irregularitèr inciso-dentatis venosis, floribus verticillato-spicatis, petalis glabris linearibus pallide roseis, bracteis petalisque pubescentibus, capsulis hirsutis, floribus decandris. *Knowles & Westcott, Floral Cabinet, t.* 65.

A New Holland greenhouse shrub, from the Birmingham Botanical Garden. "It possesses a singular and pleasing appearance, having its dense spikes of flowers crowned with purple leaves, its stem red, and its leaves strongly veined with red. It is a plant of slow growth and a rigid habit."——The pentamerous flowers separate it from Weinmannia. Is it really a New Holland plant?

¶ 37. BRĀSSĬĂ *cochleātă;* sepalis petalisque subæqualibus linearibus acuminatis, labello elongato cochleato acuminato. *Knowles & Westcott, Floral Cabinet, t.* 53.

A native of Demerara, where it was found by Henchman.

It has green flowers, with long narrow spotted segments, and a lip narrow, and hollowed out below the point, where it terminates in a slender bristle. It is not handsome, but is very distinct.

¶ 38. BILLARDIĒRĂ *daphnŏīdēs;* fruticosa, ramis non scandentibus, foliis lanceolatis subacutis suprà glabris subtùs sericeo-villosis, floribus pedecellatis solitariis axillaribus luteis, antheris sagittatis, stigmatibus obtusis quadripartitis, baccis sericeis. *Knowles & Westcott, Floral Cabinet, v. 2. p.* 60.

Native country not mentioned. A greenhouse shrub, described as having the appearance of proving a dwarf rigid shrub. The branches are covered with hairy down. The flowers are smooth, yellow inside, striped on the outside with a dullish purple.

¶ 39. GESNĒRĬĂ *reflēxă;* herbacea, foliis subsessilibus cordatis crenato-dentatis rugosis villosis acutis, racemo terminali reflexo, bracteis cordatis acutis reflexis, corollis arcuatis tomentosis ; labio superiore elongato fornicato basi angustato inferiore brevi fauce obliquâ latissimâ truncatâ. *Knowles & Westcott, Floral Cabinet, t.* 67.

This plant is very near *G. faucialis.* It is unnoticed by name in DeCandolle's recent volume of the Prodromus, but is probably the same as his *G. Cooperi.* Like all the genus it is very handsome. The garden report of its having been found near Valparaiso is about as probable as if it had been said to come from Iceland.

¶ 40. PLEUROTHĀLLĬS *villōsă;* foliis ovatis coriaceis, petiolis sulcatis, scapo flexuoso, bracteis spathosis, floribus villosis purpureo-maculatis, supremo sepalo subspathulato margine reflexo carinato, sepalis lateralibus connatis basi gibbosis, petalis spathulatis minutis, labello linguiformi recurvato sulcato. *Knowles & Westcott, Floral Cabinet, v.* 2. *p.* 78.

Imported from Mexico by Mr. Barker. "It grows about four inches high ; the scape is flexuose, and at each bend there is a flower, very woolly, and beautifully spotted with purple ; the lateral sepals are gibbous at the base."——It therefore seems to be a Specklinia.

¶ 41. PLEUROTHĀLLĬS *ciliātă;* caule adscendente subtereti sulcato, folio coriaceo elliptico-lanceolato emarginato, racemo recurvo folio breviore, floribus alternis secundis, sepalis minutissimè ciliatis lateralibus nisi apice connatis superiore erecto, petalis lineari-lanceolatis ciliatis columnâ paulò longioribus, labello sub-ciliato linguæ-formi obtuso concavo, clinandrio tridentato. *Knowles & Westcott, Floral Cabinet, t.* 19.

A cinnamon-flowered species, collected by Henchman on the Masseroni river in Demerara, and first flowered by Mr. Willmore.

¶ 42. ĪRĬS *deflēxă*; barbata, scapo flexuoso declinato multifloro foliis longiore, foliis ensiformibus apice falcatis marginatis glaucis, floribus inferioribus pedunculatis, spathis viridibus, germinibus trigonis. *Knowles & Westcott, Floral Cabinet, t.* 51.

An oriental species, from the Birmingham Botanic Garden; very near *I. subbiflora*, from which it is said to differ "in having the scape flexuose and deflexed, and bearing four or sometimes five flowers (never less than three), and by having a three-sided germen. Furthermore it is so tender as to require a stove heat, or that of a warm greenhouse."

¶ 43. MAXILLĀRĬĂ *aūrĕō-fūlvă*; pseudo-bulbis rotundato-ovatis angulatis rugosis monophyllis, foliis oblongo-lanceolatis costatis acutis scapo radicali multifloro brevioribus, floribus longè pedicellatis apice reflexis, sepalis lanceolatis acuminatis lateralibus basi in calcar spurium productis, petalis striatis lineari-lanceolatis acuminatis, labello unguiculato trilobo in medio striato: lobis lateralibus acutis intermedio lanceolato acuminato, gynizo subrotundo margine superiore crasso. *Knowles & Westcott, Floral Cabinet, t.* 83. *Hooker in Bot. Mag. t.* 3629. (M. stenopetala, *Flor. Cab. vol.* 2. *p.* 112.)

A very pretty species from the Organ mountains of Brazil, with racemes of orange-coloured flowers. From the observations of the authors of the Floral Cabinet it has the technical character of Bifrenaria.

¶ 44. BEGŌNĬĂ *diversifŏlĭă*; herbacea, glaberrima, foliis radicalibus reniformibus latè crenatis, caulinis sublobatis inæqualiter argutè serratis, superioribus inæqualiter cordatis, floribus axillaribus, pedunculis petiolos æquantibus ramosis, capsulæ alâ maximâ acutangulâ. *Knowles & Westcott, Floral Cabinet, t.* 14.

A pretty tuberous-rooted herbaceous stove plant, with large bright pink flowers. Nothing is mentioned of its native country or history, but it is said to be allied to B. Martiana.

¶ 45. ONCĪDĬŪM *carinātūm*; pseudo-bulbis ovatis, foliis lanceolatis, scapo erecto, floribus secundis racemosis, petalis conniventibus maculatis, pedicellis flexuosis, labello cristato integerrimo, bracteis scariosis. *Knowles & Westcott, Floral Cabinet, vol.* 2. *p.* 30.

A pretty little species obtained from Xalapa by Mr. Barker. "It differs from Oncidium in having the wings of the column in the centre instead of at the apex.——The labellum is also entire and keeled from the apex."

¶ 46. ONCĪDĬŪM *intermĕdĭūm;* foliis oblongis acutis rigidis carnosis, scapo flexuoso paniculato ramoso multifloro, sepalis undulatis unguiculatis subintegris supremo rotundato subcochleato lateralibus spathulatis subreflexis, petalis latè unguiculatis subrotundatis crenulato-crispis, labelli lobis lateralibus nanis revolutis intermedio reniformi undulato emarginato, crista posticè lobis 2 crassis tuberculatis anticè callis tribus intermedio elevato elongato lateralibus divergentibus, columnæ alis carnosis obliquis suprà margine repando-sinuato infrà auriculâ elongatâ. *Knowles & Westcott, Floral Cabinet, t.* 60.

Imported from Cuba by George Barker, Esq. A very beautiful plant, allied both to *O. carthaginense* and *luridum*, from both which it is said to be distinguished by many characters. The flowers are bright yellow spotted with crimson, as in *O. guttatum.*

¶ 47. ONCĪDĬŪM *unicornūtūm;* pseudo-bulbis oblongis compressis costatis diphyllis, foliis lineari-lanceolatis, scapo simplici gracili glauco multifloro, sepalis petalisque latè lineari-spathulatis inferioribus in unum connatis, labelli lobis lateralibus rotundatis denticulatis intermedio subcuneato basi unicornuto, cristâ elevatâ transversâ, columnæ alis abbreviatis. *Knowles & Westcott, Floral Cabinet, vol.* 2. *p.* 143.

A native of the Organ mountains, from Mr. Willmore's collection. Nothing further is said about it.

48. SPIRONĒMĂ *frāgrāns.*

A Mexican herbaceous plant, introduced by Mr. Barker, with something of the appearance of a Sanseviera, but very fragrant, has lately flowered with Messrs. Lowe and Co. of Clapton. As a detailed account of it will be given very soon in this work, with a figure, it is only necessary now to mention the circumstances by which it is distinguished from other genera of Commelinaceæ to which it belongs. *Sepals* green, scale-like, rather larger than the petals, which are transparent and very delicate. *Stamens* six, equal, with spiral *filaments*, and cordate petaloid *anthers*, bearing their cells transversely upon the base. *Ovary* three-celled; *ovules* horizontal, globose, one above the other; *stigma* simple.

¶ 49. EPIDĔNDRŪM *stenopĕtălūm;* pseudo-bulbis cylindraceo-oblongis; foliis lanceolatis; floribus solitariis; sepalis lanceolatis; petalis angustè linearibus; labello trilobo, lobo medio cuspidato-purpureo, lobis lateralibus subrotundis albidis columnam involventibus. *Knowles & Westcott, Floral Cabinet, vol.* 2. *p.* 175.

"A delicate and pretty species, native of Mexico, and imported by Mr. Barker in 1837. Its sepals and petals are brownish ; the labellum white, with the upper portion tinged with purple. It appears to produce only a solitary flower at a time."

50. COBǢĂ *stipulārĭs.* Bentham plant. Hartweg. p. 45.

This fine species has been raised in the garden of the Horticultural Society from Mr. Hartweg's Mexican seeds. Its habit is that of the old Cobæa scandens, but it is apparently more delicate, the leaves are narrower, of a paler and brighter green, and the flowers are described as being yellow, three inches long, obliquely inflated at the apex, and very much contracted below the middle. It will doubtless prove a summer climber ; but will not bear our winters.

51. CLĔTHRĂ *mexicānă.* DeCandolle Prodr. 7. 590. Bentham plant. Hartweg. p. 45. no. 341.

An evergreen shrub or small tree from the colder regions of Mexico, where it has been found by various collectors. Mr. Hartweg sent home seeds, but they have not grown ; it however exists in our gardens, having been raised by Messrs. Loddiges. The leaves are obovate, very obtuse, about four inches long, and white with down on the under side. Its flowers appear from the dried specimens to be very like, and quite as handsome as, those of *Clethra arborea.*

52. ĀLNŬS *jorullēnsĭs.* Humb. Bonpl. & Kunth, nov. gen. et sp. pl. 2. 20. Bentham plant. Hartw. p. 52. no. 392.

A very fine looking Alder, from seeds of which, collected in Mexico by Mr. Hartweg, at a place called Zacualtipan, in the mountains between the city of Mexico and Tampico, plants have been raised in the garden of the Horticultural Society. It has fine oval acuminate leaves, from four to five inches long, with veins prominent and downy on the under side. Mr. Hartweg considered it a Birch, but it seems to be an undoubted species of Alder. It may be expected to be hardy.

53. GĀRRY̆Ă *laurifŏlĭă.* Hartweg in Benth. plant. Hartweg. p. 14. no. 81.

This gives our gardens a new species of the curious hardy genus *Garrya,* of which Mr. Hartweg has discovered no fewer than five during his travels in Mexico. A considerable quantity of seed was given away by the Horticultural Society, and it appeared to be in good condition ; from that however retained for the garden one seed only has germinated, so that the species is probably of extreme rarity. It is a handsomer looking plant than *Garrya elliptica*, with oval laurel-like leaves, which are covered with down on the under side. According to Mr. Hartweg it grows on the mountains in the northern provinces of Mexico. He found it near Guanaxuato a shrub from fifteen to eighteen feet high ; but at Anganguco it formed a tree with a trunk two feet in diameter.

54. ARĪSǢMĂ *macrospāthă.* Bentham plant. Hartweg. p. 52. no. 394.

A small stemless plant, with tuberous roots like those of the common Arum, purple-stalked pedate leaves, and a pink or purple spathe from five to six inches long. It will probably form a greenhouse herbaceous plant. Mr. Hartweg found it in shady woods near Morelia flowering in July, and sent it to the Horticultural Society, with whom it has been raised.

55. HYMENOCĀLLĬS *rotātă.* *Herbert Amaryll.* p. 217.

There is a good figure of this plant in the *Floral Cabinet*, Vol. 2. p. 51, and an interesting account of its peculiar habits at p. 47 of the same volume, from which it appears that the species lives in the deep muddy swamps in the neighbourhood of Mobile, which it studs with its beautiful snow-white starry blossoms, and perfumes with its fragrance, at a time when, from the softness of the mud such places are unvisited except by the most adventurous travellers. It is stated that the bulbs frequently lie imbedded two feet in the mud, so that the entire plant is full four feet high, and the collector, in his efforts to obtain the bulbs was frequently sunk above his middle in this unpleasant bath. In the summer months, when such swamps become hard, the plant dies down and disappears, its very site being covered with other vegetation.

It is much to be regretted that in publishing an account of this fine plant the authors of the work in which it appeared should have stated it to be new, and named it *Ismene Knightii ;* a double error being thus committed, the plant not belonging to the genus *Ismene*, but to *Hymenocallis*, and not being a new species, but one long since published in Messrs. Loddiges' Botanical Cabinet, t. 19, and in the Botanical Magazine, t. 827, under the name of *Pancratium rotatum*, by which it is well known in collections. These are the new names, and such the changes of names, concerning which the public has a just right to complain; for they not only create intolerable confusion in nomenclature, but altogether mislead the lovers of plants, who upon the faith of works of apparent respectability are led to purchase, for the sake of its new name, and probably at a high rate, what they have already long possessed under some other name.

56. EPIDĒNDRŪM (Encyclia) *glaūcūm*; undique glaucedine obductum, pseudobulbis ovalibus compressis monophyllis, foliis ensiformibus acutis pergameneis basi canaliculatis scapo pendulo paniculato brevioribus, sepalis petalisque ovalibus obtusis, labelli linearis apice carnosi trilobi lobis lateralibus rotundatis intermedio ovato medio calloso, columnæ cardine appendice ovatâ obtusâ recurvâ aucto. (Epithecia glauca, *Knowles & Westcott, Floral Cabinet, t.* 87.

Mr. Barker, who imported this curious plant from Mexico, has favoured me with specimens, which enable me to state that it cannot be generically separated from the genus Epidendrum. It is not a showy plant, the flowers being small, scentless, and green stained with dull purple. The drooping panicle is somewhat remarkable, and the glaucous covering of every part is much more so; but the species has no claims upon the attention of those cultivators who seek after ornamental plants.

57. BARKĔRĬĂ *ēlĕgāns*. Knowles & Westcott, Floral Cabinet, t. 49.

An elegant little Mexican Orchidaceous plant, with tapering fleshy stems like those of a meagre Cycnoches, narrow-lanceolate acuminate membranous leaves, and a terminal inflorescence, in the form of a raceme of a few large bright pink flowers. It is well figured in the Floral Cabinet, and is one of the few plants which rival the Cattleyas in gaiety of appearance. It is however said to be difficult of cultivation, and is at present of great rarity. The genus is well distinguished from Cattleya, to which it approaches most nearly, by its lip being flat and undivided, instead of cucullate, and more or less completely three-lobed, as well as by its peculiar habit. As the genus has not yet found its way into books generally used by Botanists, a short technical character of it is added.

BARKERIA. Sepala & petala æqualia, libera, membranacea, patentissima. Labellum planum, integerrimum, nudum, (cuneatum cum apiculo) columnæ adpressum. Columna petaloidea. Anthera 4-locularis, carnosa, septorum marginibus membranaceis. Pollinia 4, caudiculis totidum ligulatis reflexis, per paria connatis.——Herba epiphyta, caulibus fusiformibus carnosis. Folia angusta, membranacea, nervosa. Pedunculi longi, graciles, squamati, terminales, apice racemosi. Flores magni, conspicui, nutantes.

58. COTONEASTER *denticulata*. Humb. Bonpl. & Kunth, nov. gen. & sp. plant. 6. 214. t. 556. Bentham plant. Hartweg. p. 36.

A hardy shrub, raised by the Horticultural Society from seeds collected in Mexico by Mr. Hartweg. It was found very common on the sandstone hills near Regla, fruiting in October and flowering in May. It appears to be a genuine Cotoneaster, and is the first species of the genus observed in the New World. The leaves are scarcely an inch long, rounded at the point and slightly toothed there, whence its specific name ; on the upper side they are dark green, on the under side grey with down. The flowers are small, and white or pink, in little terminal corymbs somewhat larger than the leaves.

59. CŌRNŬS *grāndĭs*. Schlechtendahl in Linnæa, v. 171. & ix. 604. Bentham plant. Hartweg. p. 38. no. 293.

Whether or not this fine Dogwood is hardy is at present uncertain. It is to be hoped that it will prove so, for it has a beautiful foliage ; the leaves being from three to five inches long, smooth and deep green above, hoary with down on the under side. The fruit seems as large as a sloe, and purplish black, covered with bloom. The flowers are in small heads, and are probably not conspicuous. It has been raised by the Horticultural Society, from Mexican seeds sent home by Mr. Hartweg, who found it in ravines near Chico, where it formed a small tree or shrub ; it had previously been met with by Deppe and Schiede near Xalapa.

60. LOPĒZĬĂ *lineātă*. Zuccarin. pl. novæ fasc. 2. 31. Bentham plant. Hartweg. p. 37. no. 287.

A very pretty greenhouse shrub, loaded with a profusion of pale red flowers during all the winter and early spring. The Horticultural Society have raised it from Mr. Hartweg's seeds, it having been found by that collector in the form of a shrub four to five feet high, in a place called the "Banco," for an explanation of the meaning of which I shall be obliged to any of my Mexican friends. A figure of it will soon appear in this work.

61. SOLĀNŪM *betācĕūm.* Cav. ic. vol. 6. t. 524.

This plant is noticed for the sake of identifying it with the "Tree Tomato," which has appeared in several collections, from seeds gathered in the woods of Tucuman by Mr. Tweedie. It was long ago figured in the *Botanist's Repository, t.* 511, and was afterwards lost. It is a tall coarse weedy looking plant, with large heart-shaped leaves, and little axillary racemes of pale violet flowers. It has no beauty whatever ; but its name seems to indicate the fruit being used for sauces ; it has not ripened here that I know of.

Endlicher's Genera Plantarum. (See Bot. Reg. misc. 1839. p. 40.)

There is great satisfaction in being able to announce that this highly important work will probably be completed in the course of the present year. The twelfth part, published in Vienna in November last, has reached this country, and goes as far as genus 5213 Arversia, in the midst of Caryophylleæ. The whole of the manuscript of the body of the work has been some time in the printer's hands, and the Supplement, a very important part, is now engaging the learned author's constant attention. When the work is fully before the public, it will have placed systematic Botany in a better position than it has been in since the appearance of the *Genera Plantarum* of *Jussieu*, half a century ago. The recent appointment of Dr. Endlicher to the charge of the Botanic garden of Vienna, as the successor to the late Baron v. Jacquin, will be most gratifying to all the friends of science ; and the more so, as it was the spontaneous and unsolicited act of the Emperor.

CATALEPSY* of Physostegia virginiana, *Benth.* (Dracocephalum virginianum. *L.*)

There are some curious and interesting remarks upon this subject by Prof. Morren, in the *Bulletin de l'Académie royale de Bruxelles,* no. 10 for 1836, of which the following is an abstract, with the wording in some respects altered in consequence of the want of diagrams and drawings to illustrate the author's paper.

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* Catalepsy is defined to be a disease in which the nerves and power of voluntary motion are suddenly suspended, the body and limbs of the patient remaining unmoved in the situation in which they happen to be at the moment of the attack, and readily receiving and retaining any other position which is communicated to them by external force.

The inflorescence of this plant is a close spike. The flowers are opposite in pairs, in a decussate manner, and are about three-quarters of the length of a calyx from each other. The phænomenon consists in this, that if you turn a flower standing in face of you so far to the right or left as to stand over the next flower below it, it will retain its new position without springing back again to its original place; and if it is first bent to the right this will not prevent it being afterwards bent to the left, but it may be moved at pleasure to one side or the other within the limits of half the circle described by the points of the flowers round the axis on which they grow. What is called catalepsy in this plant is the power which the flowers possess of maintaining themselves in a position artificially given to them, without their elasticity bringing them back to the point from which they were turned, as is the case in all other plants.

This property is exceedingly striking when observed for the first time, and converts the Physostegia, which has tall erect stems, covered with long spikes of flowers, into a natural Vane, whose corollas indicate the direction of the wind with great precision.

This cataleptic property is only preserved by the flowers when moved horizontally; if raised up and down, they spring back to their original position with considerable force. They even oscillate, in recovering their place, with great rapidity, which shows that their stalks are, at least in a vertical direction, provided with a high degree of irritability. Similar results are obtained from moving the flowers in all other directions except the horizontal, to which the cataleptic effect is confined. It is moreover exceedingly remarkable that the effect should be limited to the period of flowering; neither before that time, when the flower buds are pressed upon by their bracts, nor afterwards when the pedicels are directed obliquely upwards, is the phænomenon observable; so that it appears evident that this catalepsy is limited to the time of fertilization; it favours the projection of pollen upon the stigma by the shocks communicated to the corolla by the wind, in displacing it and striking it against other flowers; and M. Morren regards it as one of the numerous physiological efforts which are manifested in such infinite variety at the time of fertilization.

M. DeCandolle, who has noticed this phænomena, ascribes it, with some doubt, to the "low degree of elasticity resident in the flower stalk," *(Physiologie Végétale*, i. 14) ; M. Morren's researches have led him to a very different conclusion. He found that the non-elasticity of the flower-stalk, when moved horizontally, exists only so long as it adheres to the stem, and that when it is cut off it indicates abundant elasticity in all directions ; and the eventual result of his enquiries was that, after all, the catalepsy of this plant is only *sham.* I now quote the author literally.—"In fact, if the flower-stalk is elastic when cut off, why should it be cataleptic while adhering to the stem ? I therefore removed from a stem, with very sharp scissors, a bract quite down to its base ; I then turned the flower to the right, when it sprang back to the left, and *vice versa ;* so that under these circumstances the elasticity was restored and the catalepsy gone. This curious experiment, the precise and positive result of which was really surprising, always succeeded ; and if an observer were not to push his enquiries any further, he would conclude that the phænomenon is dependent upon the bracts ; it will be seen that in point of fact there is no catalepsy at all."

Other experiments shewed that by cutting away half a bract, dividing it from the point to the base through the midrib, the flower recovered its elasticity on the side whence the bract was removed, but remained destitute of it on the side where the bract was uninjured ; so that by such a contrivance, a flower can be brought into a *state of elasticity on one side and of catalepsy on the other !* It is however necessary to cut away the bract down to the point of its insertion, otherwise the apparent catalepsy is not destroyed.

M. Morren observes that these curious phænomena are wholly dependent upon the peculiar arrangement and proportion of the flower-stalks and bracts, and that they are merely mechanical. It appears that each pedicel reposes in a bract channelled like a gutter, and that its length is a trifle more than half the breadth of the bract at its base, and it is in this circumstance that the whole secret lies. The bract is much more rigid than the flower-stalk, is immoveable, and is placed close to the flower ; when the flower is turned to one side the base of the calyx, which forms a projection above the flower stalk, slips over the edge of the bract, catches there, and the force of the flower-stalk being less than the resistance of the bract, it cannot be pulled back again by any power of its own. After flowering the flower-stalk becomes more woody and stronger, and thus is able to recover itself if it catches against the edge of the bract, which is however not likely to happen, because it is raised upwards beyond contact with that organ.

In conclusion, M. Morren compares the mechanism which causes the apparent catalepsy of Physostegia to the escapement of a watch, where a hooked lever stops the wheel and regulates the movements.

62. ĪRĬS *deflēxă*. See no. 42, page 25, of the miscellaneous matter of this volume.

Upon the subject of this plant I have received the following memorandum from the Hon. and Rev. W. Herbert, who is specially attending to the whole order Iridaceæ.

"Having just received the new No. of the Register, I see your quotation of Iris deflexa with erroneous statements concerning it, extracted from the Floral Cabinet. I have the plant; it came from Birmingham with that name, and I have flowered it. I have also seen it in flower at Osborne's nursery, where it had endured the winter of 1838, as it has last winter here. It is Iris nepalensis of the Bot. Register, and identical with the specimens of Iris nepalensis from Kamoon. It is utterly untrue that it is in any degree tender, and it has no disposition to have a flexuous and deflexed stalk, which was the consequence of cultivating a perfectly hardy plant under glass supposing it to be tender. Furthermore it is a variety of Iris Germanica, not distinguished by any feature except the size and tint of the flower. I may take this opportunity of adding, that the plant figured in the Bot. Mag. as Iris subbiflora is an Italian variety of Iris Germanica; and that the Lisbon Iris subbiflora, which I possess, is very different from it. The true name of the Iris figured in the Floral Cabinet as deflexa is Iris Germanica, var. Nepalensis, see Bot. Reg. 10. 818. It is forced with the same facility as the European varieties, by introducing it for a few days into the stove in February."

63. HYMENOCALLIS *Harrisiana;* (Herbert in litt.) "scapo dodrantali subglauco rotundatè compresso, spathâ marcescente bracteatâ, germine brevi sessili, loculis dispermis ovulis magnis oblongis, tubo quinqueunciali viridi superne albo, laciniis angustis 3¼ uncialibus albis, coronâ semunciali albâ dentibus parvis interstamineis, genitalibus superne lætè viridibus, filamentis stylo ⅝ limbo unciam brevioribus, polline saturatè aureo, foliis tribus synanthiis unciam vel ultra latis utrinque attenuatis subpetiolatis obtusè apiculatis lateribus canaliculato-inflexis scapo florendi tempore brevioribus, bulbo tunicâ brunneâ rotundatè ovato diamet. sesquiunciali. Primo vere florida, vix odorata. Ex ditione Mexicanâ."

"This species, very unlike any yet known, was imported from Mexico by T. Harris, Esq. of the Grove, Kingsbury; and three bulbs of it, sent through his liberality to Spofforth, flowered there with their first shoot in the stove at the beginning of April. The seeds of this genus are apt to burst the capsule, and become fully exposed to view in their progress to maturity; but in this species the singular phenomenon has appeared of one of the ovules, which are erect and fill the cell of the germen, splitting it and forcing itself out, twelve hours after the impregnation of the stigma, while the flower was still fresh."—W. H.

64. RIGIDĒLLĂ *flāmmĕă.* See plate 16 of this volume.

Since the article above referred to was written, I have had an opportunity of again examining with care the structure of this most curious flower, it having blossomed abundantly in the garden of the Horticultural Society; an advantage which I did not before possess, in consequence of my unwillingness to pull in pieces even a single flower of so great a rarity. This enables me to make an important addition to its definition, which however is correct as far as it goes.

I now find that at the very bottom of the cup formed by the convolution of the three scarlet leaves of the perianth there is a copious secretion of honey, and that immersed in this substance are three small rudimentary petals, resembling anthers at first sight. Each of these parts is four lines long, yellowish orange, ovate, unguiculate, and erect, with the sides rolled inwards, and on the upper and inner surface bears a prodigious multitude of very small round semitransparent bodies, closely packed together, and when viewed with a magnifying power of 80 linear resembling a bed of the most beautiful pearls. Upon applying a magnifying power of 500 linear, and examining these bodies in water as transparent objects, they are found to be simple stalked vesicles, contains ing in their centre an apparently empty sac, free all round except at the base; while the space between the sac and the sides of the vesicle is filled with a very pale yellow fluid, in which are suspended myriads of spheroidal molecules of infinite smallness, having a peculiar motion, as if carried along by a general flow round the vesicle of the fluid in which they lie. It is probable that this motion is a mere modification of that which seems universal in the fluid of the hairs of plants; but want of leisure has prevented my examining it with more attention. No doubt all this complicated apparatus is for the purpose of elaborating the honey that is secreted in the cup of the flower of Rigidella. The whole phænomenon is exceedingly well worth the attention of some skilful microscopical observer.

It is only necessary to add, that the following words must be introduced into the generic character of Rigidella. "Petala 3, nana, antheriformia, marginibus involutis, supra glandulosa et melliflua, in fundo perianthii."

65. SOLĀNŪM *betācĕūm.* See no. 61 of the miscellaneous matter of this volume.

Mr. Martin Moyes, of the Durdham Down nursery near Bristol, informs me that this plant has fruited with him for several years, and that it is when in fruit very ornamental. Last year it bore about thirty berries, which ripened in September, and hung upon the branches till the spring. Two which he was so obliging as to send me were of a rich purple colour, the size and form of a hen's egg; and had a very agreeable sub-acid taste. It is probable they would really form a good addition to that class of vegetable productions from which sauces are obtained; for they were free from the peculiar animal flavour of the common Tomatoe, while they possessed all its succulence, with the addition of a mild and pleasant perfume.

66. BRĀSSĬĂ *verrucōsă.*

At the last meeting of the Horticultural Society in Regent Street this beautiful plant was exhibited by Messrs. Rollissons of Tooting. As it is intended for one of the plates in Mr. Bateman's "Orchidaceæ of Mexico and Guatemala," it is only necessary here to state that it is a plant of a particularly graceful habit, and that the flowers are of a clear greenish yellow, with a labellum curiously covered over all the lower part with green warts.

67. CLEISŌSTŎMĂ *maculōsă.* Lindl. gen. et sp. orch. 227.

Messrs. Loddiges have flowered this Orchidaceous plant, from a specimen imported from Ceylon. It has the habit of a small Vanda, with long-stalked spikes of small yellowish-brown and pink roundish fleshy blossoms.

68. CYCLŎGY̆NĒ *canēscēns.* Bentham in Botanical Register Appendix, Swan River plants, p. xvi. no. 72.

This is a very beautiful herbaceous plant, of which specimens have been raised from Swan River seeds by Mr. Hugh Lowe of the Clapton nursery. It is a grey-leaved species, with the habit and aspect of a Galega; its flowers are at present only known from dried specimens, but they are arranged in long erect spikes towards the end of the branches, are large, and appear to be violet or blue. It will be a very pretty ornament to the conservatory and greenhouse.

69. ARCTOSTĂPHY̆LŎS *nītĭdă.* Bentham plant. Hartweg. p. 66. no. 483.

A plant or two of this rare species has been raised in the garden of the Horticultural Society, from seeds presented by Geo. Frederick Dickson, Esq. It forms an evergreen bush, with serrated shining evergreen leaves, and short erect racemes of flowers resembling those of the common Strawberry tree. Should it prove hardy it will be a plant of considerable value as an ornamental evergreen. Its fruit is unknown.

70. PHILADĒLPHŬS *mexicānŭs.* Schlecht. in Linnæa, vol. 13. p. 418. Benth. pl. Hartw. p. 61. no.458.

This is a kind of Syringa, with brown downy flexible branches, ovate somewhat cordate leaves, coarsely hairy on the under side, and either quite entire or only serrated in a very slight degree at the margin. The flowers are large, white, and in the native specimens are placed singly at the end of the twigs. It promises to be a graceful plant, although perhaps not of striking beauty. Young plants have been raised from Mr. Hartweg's seeds in the garden of the Horticultural Society.

SOURCE OF THE DRUG CALLED TRAGACANTH.

The real origin of many of our officinal drugs is involved in obscurity, or the statements made by authors concerning them are in great need of confirmation, even when true. The common gum called Tragacanth, brought to us from the Levant, is no exception. Linnæus evidently considered it to be produced by the plant he called *Astragalus Tragacantha*, a French species, called by the Botanists of that country *A. massiliensis;* but DeCandolle assures us that no gum whatever is furnished by that plant. Another species, the *A. creticus*, has been named as the source of the drug, and it does appear that a small quantity is obtained from that species in Candia; but certainly not the bulk of the samples of commerce. Labillardiére relates that his *A. gummifer* furnishes Tragacanth on Mount Lebanon; but the samples obtained from thence are said to be not the same as those of commerce, being white and more transparent, and dissolving less readily in water. Finally, Olivier assures us that the principal part of the Tragacanth used in Europe comes from *Astragalus verus*, a Persian species. The only certain conclusion that can be drawn from these statements is, that Tragacanth is a secretion from some sort of *Astragalus* belonging to that curious division of the genus which consists of spiny bushes.

The subject has been very recently investigated by James Brant, Esq., H. M. consul at Erzeroum, who has sent excellent dried specimens of the Tragacanth plants of Koordistan to the Hon. W. F. Strangways, who has placed them in my hands. One of these is labelled "The shrub that yields the white or best variety of Gum Tragacanth," and is the *A. gummifer*, a very pretty bush, unknown in the gardens of Europe, and very much to be desired as an ornamental plant. For it is covered with myriads of short spikes of yellow flowers embedded in wool, and surrounded by bright green smooth leaves. The specimen before me is little more than a span across, and it has from 70 to 80 of such spikes. Mr. Brant's other Tragacanth is labelled "Shrub from which the red or inferior species of Gum Tragacanth is produced." This is quite a different plant, with hoary spiny leaves, and little cone-like heads of flowers, whose feathery calyxes are as long as the corollas. It is evidently very near the *A. micro-*

cephalus of Willdenow, of which I have seen no specimen, but if the character given by that author or by DeCandolle are to be relied upon, it must be different. By the latter it is only separated from A. Barba Jovis, at the instance of Steven; but if Mr. Brant's species were intended it could never have been joined with the latter, whose pods are described as smooth. Willdenow speaks of the teeth of the calyx being short, whereas in Mr. Brant's plant they are unusually long, and almost hide the corolla. Finally, the term mucronate applied by these Botanists to the leaflets by no means expresses the long rigid spine by which they are terminated. It must therefore be regarded as a new species, of which the characters are subjoined under the name of *A. strobiliferus.*

Hence it appears that the best Tragacanth is really furnished by *A. gummifer*, as Labillardiére affirmed; that no additional evidence as to the accuracy of Olivier's statement concerning *A. verus* has been obtained; but that the existence of a third Tragacanth plant has been clearly ascertained. The specific character of A. strobiliferus may be stated thus:

71. ASTRĂGĂLŬS *strŏbĭlĭfĕrūs;* floribus in strobilum ovatum sessilem axillarem capitatis, bracteis imbricatis apiculatis tomentosis, calycibus plumosis 5-fidis: laciniis corollæ æqualibus, foliolis 3-jugis lanatis ovalibus apice aristatis glabris, basi angustatis.

OAKS OF KOORDISTAN.

The same intelligent traveller, to whose collections we owe the preceding evidence concerning the origin of Tragacanth, has sent home some most interesting specimens of the Oaks of Koordistan; and it is not a little remarkable that out of six or perhaps seven species in his herbarium, one should be almost unknown to Botanists, and at least three others not only quite new but of singular beauty as forest-trees. As means have now been taken by Mr. Strangways to procure the acorns of these valuable plants, we may expect to see them in a year or two in our gardens, and therefore a short account of them may be admitted into this work.

Quercus infectoria, producing the nut galls of the Levant, from which ink is made; another plant that may be a deeply pinnatifid state of *Q. sessiliflora*, but probably quite distinct, indeterminable, however, for want of acorns; and the *Q.*

rigida of Willdenow, a beautiful species of extreme rarity, form those referred to, as being more or less known.

Those which are evidently new, are the following—

72. QUĒRCŬS *mannĭfĕră* (Robora); ramulis glabris, foliis petiolatis oblongis subcordatis incisis lobis obtusis supra glabris subtus pubescentibus, gemmis fœmineis ovalibus sessilibus aggregatis imbricatis glabris.

Although no acorns or cups are present on the specimens, no doubt can, I think, be entertained that this plant is specifically distinct from our *Q. sessiliflora*, with which alone it can be confounded. The leaves are much thinner and larger; and their petioles and veins exhibit no trace of the yellowness so characteristic of our own wild plant. It derives its name from the following circumstance, which I give in the words of Mr. Brant.

"The Koordistan Manna oozes from the upper surface of the leaves of this oak, during the hottest months of the year. The natives cut the branches and steep them in boiling water until the manna is entirely dissolved; they are then taken out, and the fluid evaporated to the consistence of thick honey. When cool it is shaped into flat round cakes, which are sold as a sweetmeat. The trees produce it only every fourth or fifth year; no galls are gathered from them; and I was told that it had no purgative properties. An Armenian doctor at Van informed me that he had frequently prescribed it to nurses to promote the flow of milk: the largest dose administered by him at a time was of 71 drams avoirdupois. The natives call it Ghezen-ghevée, Ghiok-helvahsée, and Koodret-helvahsée; and from the circumstance of its being found on the upper surface of the leaves, as well as upon stones, pretend that it drops from the sky; hence the appellation of "Ghiok-helvahsée" (the sweetmeat of heaven).

"The Willows at Van, while I was there, were covered with a syrupy fluid, which in taste and appearance exactly resembled the Oak-manna; and the Doctor said that it was the production of a small insect (I believe a species of bug), which was common on these trees."

The manna itself, of which I have received a good quantity, is much mixed with impurities, but it has a very sweet taste, with the mucilaginous quality of gum, and the stickiness of boiled sugar. What its chemical composition may be, will I hope be ascertained by my friend, Mr. Edward Solly, to whom I have given a portion, or by some other observer. At a temperature much below that of boiling water, it becomes fluid, and may be easily made into such cakes as Mr. Brant speaks of. When cold it is hard and brittle.

73. QUĒRCŬS *rĕgĭă* (Ilices ?) ramulis glabris, foliis petiolatis ovato-lanceolatis cordatis grossè inciso-dentatis undulatis utrinque nitidis viridibus glaberrimis: dentibus lobisque aristatis.

Of this species also there are no traces of fruit, and its general appearance is very much that of the Spanish Chesnut. Its buds, however, shew it to be a Quercus and not a Castanea. It is certainly the finest Oak I know, its beautiful dark green shining leaves being as much as nine inches long, by three inches broad at the heart-shaped base. The leaf-stalks are almost three-quarters of an inch long. It probably belongs to the same section of the genus as Q. rigida.

74. QUĒRCŬS *Brāntĭĭ* (Ilices ?) ramis petiolis foliisque subter densè et mollitèr tomentosis, foliis cordatis ovatis aristato-dentatis acutis super stellato-pubescentibus cinereisque.

No doubt can be entertained as to this being also a species totally unknown prior to Mr. Brant's discovery of it. The fruit is however still a desideratum. It is a most remarkable plant, the full-grown leaves being six inches long including the petiole, and three inches and a half across at the widest part, which is near the base. They are as downy as those of a young plum tree; and the plant must, in a live state, be altogether unlike any of the species now in cultivation. It may be perhaps compared to a Quercus Ballota, with the leaves decupled in size. It need scarcely be added, that a name has been given it in compliment to its zealous discoverer. Alas for civilization! that we do not know what even the forest trees are of countries whose history is coeval with that of the human race. But it is to be feared that Botanical collectors, while they hunt with all diligence and surprising sharpsightedness after microscopical curiosities, acquire a sort of false vision, which renders them incapable of perceiving any thing else; they cannot find the trees of the forest because they are so large.

WISTARIA (or Glycine) SINENSIS.

A magnificent specimen of this plant, 180 feet long, and covering about 1800 square feet of wall, has been for some time an object of great interest in the garden of the Horticultural Society, where hundreds of persons have visited it and admired its piles of lilac-coloured fragrant flowers. The following little calculation will serve to shew how wonderful is the evidence afforded by this single specimen of the creative power of Nature.

The number of branches was about 9000, and of flowers 675,000. Each flower consisting of 5 petals, the number of those parts was 3,375,000. Each flower contained 10 stamens, or the whole mass of flowers 6,750,000. Each ovary contained about 7 ovules, so that preparation was made for the production of 4,050,000 seeds, for the purpose of fertilizing which the anthers, if perfect, would have contained about 27,000,000,000 pollen grains. Had all the petals been placed end to end they would have extended to the distance of more than *thirty-four miles.*

Physiological Works of the late Thomas Andrew Knight, Esq.

It will be satisfactory to those occupied in physiological researches to learn, that there is in preparation for immediate publication a selection from the papers and correspondence of the late Mr. Knight. That these materials are in very good hands I have no doubt; but I must beg to contradict, as wholly destitute of foundation, the statement made in some of the newspapers that they are confided to my care.

75. CORYĀNTHĒS *specĭosă;* var. alba.

A pale, indeed almost white, variety of this extraordinary plant has lately flowered in the collection of Thomas Brocklehurst, Esq. of the Fence, near Macclesfield, who obtained it from Demerara. Mr. Appleby, the gardener at the Fence, informs me that the pseudo-bulbs are four in number, five inches long, tapering from the root to the insertion of the leaf, and deeply furrowed; the leaves are sixteen inches long, of a very long oval shape in the widest part, which is near the middle, one inch and three-quarters wide, deeply ribbed, and of a light green colour. The flower-stalk is one foot to the first flower and four inches beyond it, bearing four flowers. He thinks it probable that the flowers will be more numerous and larger as the plant becomes stronger. The appearance of the plant is described as being intermediate between C. macrantha and maculata.

76. POLEMŎNĬŪM *cœrŭlĕūm;* var. grandiflorum.

A beautiful variety of this common flower has been raised in the garden of the Horticultural Society, from seed received from India through the East India Company. It is rather taller than usual, and the flowers, which are blue, are nearly three times as large as those of the common kind. It is a fine addition to the stock of biennial flowers.

77. THALĪCTRŪM *cultrātūm.* Wallich.

This is an hardy herbaceous plant, of no beauty, raised in the garden of the Horticultural Society, from seed obtained from the Himalayas through the East India Company. It has a slender glaucous stem, from two to three feet high; ovate, glaucous, reticulated leaflets; and greenish-yellow flowers scattered over somewhat horizontal racemes.

78. TANACĒTŪM *longifŏlĭūm.* Wallich.

Another weedy plant from the Himalayas, introduced by the Hon. East India Company. It has finely cut light green leaves, a stem one and a half to two feet high, and rather large capitula of rayless yellow flowers. It is not at all worth cultivation, except in a Botanic Garden.

GUATEMALA ORCHIDACEÆ.

Mr. Skinner, a gentleman resident in Guatemala, and well known as a very liberal and enthusiastic naturalist, has lately sent several valuable collections of Orchidaceous plants to his correspondents in this country, which have generally arrived in the most healthy state. Amongst others Mr. Harris of Kingsbury has received a portion, which Mr. Beaton informs me were in such excellent condition as to be little the worse for their journey; a circumstance probably owing to the plants having been nailed to the sides of the boxes, with the interstices packed with Tillandsia. Mr. Beaton has found dry sawdust answer the same purpose. This at least is certain that moss, from its hygrometrical quality, is the worst of all materials. Mr. Harris having placed in my hands the dried specimens transmitted with the plants, together with Mr. Skinner's valuable observations upon the climate which they affect, I have made the following selection from the correspondence, which cannot fail to possess the greatest interest for all growers of Orchidaceæ.

79. ONCĪDĬŪM *leucochīlūm*;
80. STANHŌPĔĂ *oculātă*;
both growing on the same branch.

"This plant inhabits the higher temperatures, and I should recommend for its cultivation in Europe that it should not be kept in a temperature colder than 55°, or warmer than 70°; well watered from June to September every afternoon; and from October to May inclusive only slightly watered every evening at sundown, to resemble our dews, not, it must be recollected, so heavy as people represent them in Europe—the region being high, and very different to a coast climate. The seasons here are the same as in England, the coldest weather December, January, and February; on the 25th, 26th, and 27th of December, 1839, the thermometer at six o'clock in the morning in the open air for three days averaged 36° Fahr. and yet *Oncidium leucochilum* continued to shoot its young stems. Flowers in February and March."

81. EPIDĒNDRŪM *Skinnērī.*

"This plant inhabits also a middling temperature, and will thrive best in a climate graduated from 56° to 70°. Do not put this plant in earth, but permit it to have free scope for young roots and shoots, which it will throw out in August."

82. EPIDĒNDRŪM *aurantĭăcūm.*

"Same habitat as Oncidium leucochilum, always found together; only that this plant seeks exposure, and therefore is subject to greater extremes of heat and cold; the finest masses however are always found on the steep brows of rocky barrancas—thus however rarely '*come-at-able.*'" My specimen bore last month fifteen flowers on one stem.

83. CĀTTLĔYĂ *Skīnnĕrī.*

"This plant inhabits the *hot damp* COASTS, and will require a very different treatment to any of the foregoing; it is always found on very high trees, and most difficult to get at, except after a storm that may have chanced to throw down some of the large forest trees. It should be well watered daily, to represent the heavy dews and the rains, which latter are from May to November. I should recommend on whatever you may grow this plant, it may not imbibe too much of the extra moisture, as its habitat being on branches of large trees seldom having any lichen, the heavy rains do not lay. This flower does not seek too much shade, but rather, like 'Epid. aurantiacum,' exposed places. Climate 80° to 85°, and sometimes 95°, during the day. Flowers in January and February; vulgarly called 'Flor de San Sebastian,' from its being in season, and adorning the altars on that saint's day (20th of January)."

84. EPIDĒNDRŪM (Encyclia) *incūmbēns;* floribus densè paniculatis, sepalis linearibus patentissimis basi angustatis, petalis conformibus sed paulò latioribus, labelli postici lobis lateralibus triangularibus acuminatis intermedio subrotundo-ovato apiculato venis elevatis cristato, callis duobus oblongis secus unguem.

A plant "with a peculiarly graceful flower," having the same locality as Oncidium leucochilum. It is very near O. alatum, oncidioides, and the rest of the panicled Encyclias.

85. EPIDĒNDRŪM *macrochīlūm.*

"This plant inhabits the *coast,* where only it thrives in perfection. It flowers in February, March, and April. A constant attendant on Cattleya Skinneri, and will require much the same treatment. Vulgarly called '*Boca del dragón,*' '*Dragon's mouth.*'"

86. CYRTOCHĪLŪM *maculātūm;* var. Russelianum.

This is certainly one of the many fine varieties of Cyrtochilum maculatum, with very large richly spotted flowers. Mr. Skinner calls it *C. Russelii,* and gives the following account of it. "Its habitat is cold climate, and its treatment will be the same as that of Oncidium leucochilum; it luxuriates amongst pines, but only attached to oaks. No plants of the Orchideæ tribe are ever found on pines, except Catasetum towards the north coast, but then these plants form such a mass of hairy roots as to secure them completely from the influence of the pitch that, in all hot climates, constantly oozes from the pines. Climate 65° to 70°, generally."

87. LÆLĬĂ *supērbĭēns;* scapo longissimo multifloro, sepalis petalisque lineari-oblongis obtusis membranaceis labello longioribus, labelli lobo medio obtusissimo: disco lamellis quinque maximis subserratis anticè truncatis aucto, antheræ cristâ biauritâ, clinandrio denticulato.

Of this fine new species Mr. Skinner speaks in the following manner. "*Saw you ever any thing like this!!!* This most magnificent of all plants I have sent several times, it is decidedly Epidendrea, but I expect it will get a new title in Europe. It flowers in November, and in some instances bears from eighteen to twenty flowers on stems from nine to twelve feet long!! Mr. Hartweg says he found this plant in great abundance in the State of Quesaltenango, near Chantla, and that he went forty leagues out of his route to find it, and now he has sent splendid masses of it to England, and at least thirty dried specimens. I have found it most rarely and evidently planted by the Indians before their doors, in 'Acatenango,' from whence I brought the specimen now sent, and in 'Sumpango,' where I found it twelve months ago; also from Costa Rica. Chantla, its native habitat, is very cold, in fact this plant I expect will require only a greenhouse warmth. Its habitat in Costa Rica is 68° to 70°, where I have found it here 70°, but Chantla is 55° to 65° generally."

88. EPIDĒNDRŪM *Stamfordĭānŭm.*

"This plant inhabits only the coast, shady, very moist lands. Flowers in November, and in different temperatures until March, I having found it in flower at all times in different journeys. The north coast is very hot and wet, and the dry weather commences in March; I found it in flower in April there. On this side (south coast) dry weather commences in October; I found it in flower in November. You may therefore treat this plant as you would the Cattleya, its habitat on this side being from the same temperature, only it requires more wet."

89. BRASSAVŌLĂ *glāucă.*

"A splendid large white flower, and a most extraordinary strong aromatic; is the companion on oaks of the Cyrtochilum Russelii, and must be treated in the same manner."

90. HEXŌPĬĂ *crŭcĭgĕră.* Bateman mss.

"Climate 68° to 75°, and 65° to 70°.

91. EPIDĒNDRŪM *rhĭzophŏrūm.*

"Climate 70°."

92. ASPĂSĬĂ *epidendroīdĕs.*

"Very sweet; habitat 'Escuintla,' and 'Medio Monte.' Flowers in January and February. Climate 75° and 80°."

This same plant had previously been sent by Mr. Skinner from Costa Rica.

93. EPIDĒNDRŪM *aromătĭcūm.*

"Flowers in February and March. Habitat 'Acatenango,' 'Duenas,' 'Mixco,' 'Naranjo,' &c. Climate 60° and 75°."

94. ODONTOGLŌSSŪM *grāndĕ;* sepalis lanceolatis lateralibus convexis falcatis petalisque oblongis obtusiusculis latioribus subundulatis, labello subrotundo basi auriculato sepalis plus duplò breviore: tuberculis basi tribus corrugatis aliisque lateralibus dentiformibus minoribus, columnæ tomentosæ marginibus rotundatis convexis incurvis.

"This is the finest plant we have in Orchidaceæ in this country. The present specimen is a fine mass, and I hope may arrive safe. Climate 60° and 70°. I recommend not too much heat; it seldom gets a climate reaching 70°, and thrives best in damp shades, with perhaps 60°, rather than beyond that."

Certainly this is a most extraordinary plant. Its habit is altogether that of Odontoglossum, with which its unguiculate lip and peculiar column also correspond; but the tubercles at the base of the lip are those of Oncidium. The dried flowers measure *six inches and a half* from the tip of the petals, and are doubtless shrunk in the process of drying. They look something like an enormous Maxillaria, and appear to have been of a uniform yellow or white colour; but of this I cannot very well judge. Two flowers grew together on a scape, which in the specimens before me is not more than five inches long. Mr. Skinner thinks that the reason why the plants he has formerly sent home have not flourished, is because they have been kept too warm.

95. ONCĪDĬŪM *ornithorhȳnchūm.*

"Habitat shady damp places, climate 68° to 70° and 75°; flowers in December and November."

96. HARTWĔGĬĂ *purpŭrĕă.*

"Climate varied from 56° to 75°."

97. ONCĪDĬŪM *ampliātūm.*

"From Costa Rica; found there on the sea shore in the Gulf of Nicaya; since found throughout the coasts of Nicarágua, and also in the Escuintla, 15 leagues from this city; climate 80° to 85°; flowers in February."

98. CYCNŌCHĒS *ventricōsūm.*

"Habitat 80° to 85°, but found in a climate of 70° to 75° much superior.

99. CATASĒTŪM *maculātūm.*

"Habitat 75° and 80. Flowers in July."

100. TRIGONĪDĬŪM *Egertoniānūm.*

"Habitat 75° and 80°. Flowers in April."

101. MAXILLĀRĬĂ *Skīnnĕrī* (Bateman mss.); pedunculis radicalibus? bracteâ flori proximâ ovatâ cucullatâ acuminatâ sepalis duplò breviore, sepalis oblongis acutis glabris lateralibus majoribus basi parùm productis intùs villosis, petalis subrhombeis velutinis sepalo supremo brevioribus, labelli lobis lateralibus truncatis glabris intermedio ovato obtuso apiculato pubescente: laminâ retusâ transversâ infra lobum medium venisque sparsè villosis, columnâ elongatâ tomentosâ.

"This is the finest Maxillaria I ever saw. It has a gentle odour; but the lip is magnificent purply white, with centre tigered in deep rose colour. Flowers in December and January, and even in April have I seen it. Habitat 68° and 75°. Terrestrial."

Nearly allied to M. Harrisoniæ. Diameter of the flower from tip to tip of the lateral sepals four inches and a half.

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102. POLYSTĂCHYĂ *bractēŏsa;* foliis obovato-oblongis acutis in petiolum carinatum angustatis, racemo tomentoso elongato cernuo basi ramoso, bracteis foliaceis acuminatissimis squarrosis, sepalis villosis, labelli ciliati trilobi per medium villosi lobo medio ovato acutiusculo.

A drooping flowered Polystachya, with orange coloured flowers, imported from Sierra Leone by Messrs. Loddiges. Its leafy tapering squarrose bracts and downy flowers readily distinguish it from the rest of the genus.

103. EPĬPHŎRĂ *pubēscēns.* Lindl. in Comp. to Bot. Mag. v. 2. p. 201.

This very rare little Orchidaceous plant, originally found by Dr. Burchell in the Caffre country, and afterwards collected by Drège, has lately flowered with Messrs. Loddiges, who imported it from Delagoa Bay. It grows about 6 inches high, and has an ancipitous flexuose scape, terminated by a few fragrant bright yellow flowers streaked with red. It approaches very near to the genus Polystachya, next to which, among Vandeæ, it must be placed in any future arrangement. It is an epiphyte. The inside of the little trident-shaped lip is bearded with long hairs.

104. SPREKĔLĬĂ *glaūcă;* foliis linearibus glaucis, floribus solitariis cernuis, sepalis medio albo-vittatis lateralibus parùm convolutis petalisque lanceolatis apice recurvis subæqualibus.

A beautiful new Jacobæa lily, discovered in Mexico by Mr. Hartweg. It flowered in the garden of the Horticultural Society, in May, 1840. The leaves are very narrow and glaucous; the flowers are paler than those of the old Jacobæa lily, much smaller, and have a pale streak along the middle of the sepals.

105. PASSIFLŌRĂ *verrucĭfĕră;* (§ Granadilla) foliis glabris trilobis serratis basi subacutis, petiolis apice biglandulosis, bracteis sepalisque margine glandulis verruciformibus auctis, coronæ radiis subulatis petalis brevioribus.

A very curious greenhouse Passion-flower, related to the *P. incarnata* and *edulis*, but readily distinguished by its sepals and bracts bearing deep green wart-like glands upon the margin. The flowers are pale green, with a bright purple filamentous crown. It flowered in April last with Mr. Harris. The native country is unknown.

106. CIRRHOPĔTĂLŪM *picturātūm* (G. Loddiges); pseudobulbis oblongis angulatis, folio oblongo convexo emarginato, floribus umbellatis, sepalo supremo ciliato setaceo-acuminato lateralibus oblongis obtusis, petalis acuminatissimis ciliatis villosis, labello lineari recurvo secus medium elevato, columnæ auriculis obtusis integris.

A pretty little Indian plant with purple flowers, growing in flat umbels, and deeply stained with dark red. Its habit is that of a Bolbophyllum, its scape from 5 to 6 inches high. Communicated by Messrs. Loddiges.

107. CIRRHOPĔTĂLŪM *aurātūm;* pseudobulbis oblongis angulatis, folio oblongo convexo, floribus umbellatis, sepalo supremo petalisque setaceo-acuminatis fulvo-ciliatis lateralibus acutis, labello lineari recurvo, columnæ auriculis rotundatis integris.

Sent to Messrs. Loddiges from Manilla, by Mr. H. Cuming. It is very like the last, but much larger in the flowers, which are fringed with golden yellow hairs, which gives them an appearance distinct from that of the last, where they are deep purple.

108. ONCĪDĬŪM *pāllĭdūm;* pseudobulbis obcordatis compressis marginatis, foliis acutè carinatis convexis oblongis cœsiis, scapo erecto paniculato, sepalis petalisque oblongis obtusis liberis, labelli auriculis rotundatis lobo intermedio cuneato-obovato emarginato angustioribus, disci basi glandulosi appendice 5-partitâ: laciniis cornutis æqualibus pubescentibus, columnæ alis brevissimis obliquè truncatis.

A very pretty Orchidaceous plant, obtained from the Brazils by Messrs. Lucombe, Pince, and Co. of Exeter. The leaves are sea-green like those of Maxillaria Rollissonii; the panicle is almost a foot long, and the flowers are in colour similar to O. divaricatum. It is very near O. Harrisonianum.

109. STANHŌPĔĂ *Martiānă* (J. B.); foliis anguste lanceolatis acutis racemo paucifloro longioribus, sepalis petalisque paulo angustioribus ovatis obtusis, hypochilio brevi sessili saccato utrinque cornubus maximis porrectis apice cirrhosis sub-incurvis instructo, epichilio oblongo lævigato obscurè 3-dentato apice subreflexo cornubus hypochilii breviore vel subæquali, columnæ subclavatæ marginibus parùm dilatatis. *Bateman in litt.*

"A native of Mexico, discovered by Baron Karwinski in 1827, and sent by him to Knypersley, where it flowered for the first time in May of the present year. It is one of the most distinct and magnificent species of the extraordinary genus to which it belongs, and in the magnitude of its blossoms is second only to *S. tigrina.* The sepals are straw-coloured, faintly and sparingly marked with clusters of little vinous dots, the petals appear transparent white, with large spots of intense crimson, the lip is also a clear ivory white, except a slight discoloration at the base. It is however in the horns of the latter member that the most striking peculiarity of the species consist. These are of great size and strength, and might with propriety be likened to elephant tusks, their extremities moreover are twisted into small *cirrhi,* a circumstance wholly without precedent in the genus Stanhopea. The nearest affinity of the plant is perhaps *S. saccata,* but the points of distinction between the two species are so numerous and obvious, that it is not necessary to contrast them. The name of *Martiana*, which I have given to the species, is designed, I need scarcely say, to compliment the illustrious Professor of Botany at Munich. Mrs. Withers has prepared a figure which will appear in an early number of 'The Orchideæ of Mexico and Guatemala.'"

For the foregoing note I am indebted to Mr. Bateman.

110. DENDRŌBĬŪM *revolūtūm*; caulibus obtusè ancipitibus, foliis ovato-oblongis obtusis apice obliquis emarginatis basi subcarinatis, floribus solitariis oppositifoliis, sepalis petalisque acutissimis revolutis, labello carnoso convexo obtuso subtrilobo aut rhombeo per medium exarato (s. lamellis duabus inflexis parallelis instructo) lineis tribus discoloribus.

A new species imported from Sincapore, by Mr. Cuming. I have received it both from Mr. Barker of Birmingham, and Messrs. Loddiges. The flowers are straw-coloured, and about the size of those of D. Pierardi, but their lip is fleshy, convex, almost lozenge-shaped, and marked with 3 brown lines. It is not very pretty, but it is very distinct from any previously described.

111. DENDRŌBĬŪM *tĕrĕs*; caulibus gracilibus glabris, foliis carnosis teretibus obtusis, racemo terminali nudo, bracteis coriaceis spathaceis, floribus semiclausis longè cornutis, sepalis petalisque erectis acuminatis, labello cuneato apice truncato serrulato longiùs cuspidato: venis tribus pone apicem subcristatis, columnâ versus basin dente deflexo auctâ.

Another importation from Sincapore, for which I am indebted to Messrs. Loddiges. It is a slender plant, with the leaves of *Vanda teres*, and whitish fragrant flowers in terminal naked racemes. The lip is deeply stained with orange inside near the apex.

112. DINĒMĂ *palēăcēum*; pseudobulbis ovalibus compressis monophyllis, foliis ensiformibus obtusiusculis planis spicâ paucifiorâ longioribus, bracteis lineari-lanceolatis acuminatis paleaceis ovario lentiginoso brevioribus, floribus secundis, sepalis petalisque lineari-lanceolatis patulis, labello petalis æquali et subconformi carnoso apice dilatato per medium sulcato.

A Guatemala plant, imported by Mr. Bateman, to whom I am indebted for a specimen. It has pale straw-coloured flowers, of little beauty, and is only interesting as confirming the goodness of the genus *Dinema*, whose character however depends upon the number of pollen straps being 2, not 4 as in Epidendrum; the horn-like processes of the column, on which I formerly placed some reliance, are apparently only of specific value.

113. DENDROCHĪLŪM *filifŏrmĕ;* pseudobulbis conicis (ex Dom. Bateman), scapo filiformi terminali elongato, racemi multiflori rachi angulatâ subflexuosâ, bracteis paleaceis convolutis ovario æqualibus, petalis obovatis, labello cuneato rotundato basi auriculato integro intùs bilineato, columnæ appendicibus subulatis glabris liberis columnæ longitudine.

This, the first living specimen seen in Europe, of Blume's genus Dendrochilum, has flowered with Mr. Bateman, from a plant discovered in Manilla, by Mr. Cuming. It has the habit of a Bolbophyllum, with very minute greenish brown flowers, arranged in a spike, 6 inches long, upon a terminal thread-like scape about one-half that length. In affinity the genus is nearest Liparis; but the column is furnished on each side with a lateral process, apparently representing the two stamens usually suppressed in Orchidaceæ; and this is a sound mark of distinction, independent of the flowers being nearly regular, and not ringent. The species is very near *D. simile,* from which the form of the labellum separates it, according to Blume's figure; and it must also be closely allied to *D. cornutum* of the same author; but it has neither fusiform pseudobulbs, nor elongated lateral column-processes.

114. ABŪTĬLŎN *vitifŏlĭūm.* (Sida vitifolia. *Cav. Ic.* 5. *t.* 428. *DC. Prodr.* 1.471.)

For the introduction of this noble evergreen plant, which in Ireland is hardy, and which will probably be nearly so in England, the country is indebted to Capt. Cottingham, a zealous Irish Horticulturist. The following note concerning it has been received from Mr. Mackay, of the College Botanic Garden, Dublin.

" I herewith send you specimens of an Abutilon, of which my friend Capt. Cottingham sent lately a small plant to the Horticultural Garden. It was first raised by him about four years ago, and a plant of it, from which the flowers and leaves I now send you were taken, has stood in a south border, without any protection, for the last three years in our garden, as it has also done with Capt. Cottingham. It forms a handsome small tree about six feet high, and probably grows to a much greater size in Chili, which is its native country, and from whence Capt. Cottingham procured the seeds, from which it was raised. The flowers when fully expanded are white, but in drying change into azurean blue. It agrees very well with the description of Sida vitifolia of DeCandolle's Prodromus, vol. 1. p. 471.

"The flowers are large, as stated by DeCandolle, but not rose coloured, in our plant. It may however vary as to colour."

From the specimens before me the leaves appear to be as large as those of the Vine, and the flowers, which grow in umbels, are fully three inches in diameter. A figure of it will appear hereafter.

115. SĀLVĬĂ *hĭāns.* Bentham Labiatarum Genera & Species, 219.

A very fine species of Sage, with large deep blue flowers and a white lip, resembling those of S. bicolor, but far more handsome, and with coarsely wrinkled sagittate leaves. It is a beautiful hardy perennial, for which we are indebted to the Hon. Court of Directors of the East India Company. Flowers in May and June, and grows about two feet high.

116. TRIFŎLĬŪM *involucrātūm.* *Willd. Benth. Plant. Hartweg. no.* 54.

An herbaceous perennial plant with narrow leaves, loose prostrate shoots, and numerous heads of gay lemon-coloured flowers, raised from the Mexican seeds of Mr. Hartweg, in the garden of the Horticultural Society, proves to be this species, by some confounded with *T. tridentatum.* It is pretty, and would make an excellent plant for rock-work.

117. CLEŌMĒ *lūtĕă.* Hooker Flora Boreali-Americana, 1. 70. t. 25.

A very pretty neat herbaceous hardy plant, with a stem about two feet high, quinate leaves, and terminal clustered yellow flowers, with long stamens. It is described as an annual, and probably would flower like one; but it seems rather to be a biennial. It has been raised in the garden of the Horticultural Society, from seeds collected in North-west America, and presented by H. Moreton Dyer, Esq. V.P.H.S.

118. ACONĪTŪM *ovātūm;* caule erecto pyramidato pubescente, foliis amplexicaulibus cordatis ovatis obtusis planis altè crenatis, pedicellorum bracteis 2 foliaceis concavis inflexis, galeâ rotundatâ, sepalis lateralibus ovatis obtusis venosis, petalis apice reniformibus anticè biauritis, ovariis quinque tomentosis.

A very ugly, but a most curious plant, being no other than a hardy Aconite, with undivided (!) leaves, which are merely crenated, and embrace the stems. It has been introduced from Cashmere by the Hon. Court of Directors of the East India Company. The flowers are in loose pyramidal racemes, dull purplish green, and before they expand, there is scarcely any thing to be seen except the round helmet.

119. EŬTHĂLĒS *macrophylla;* caule erecto crasso ramoso, foliis oppositis petiolatis oblongis dentatis, floribus laxè dichotomè paniculatis.

A very fine herbaceous plant from Swan River, with a stout fleshy stem, 2 feet high, broad deep-green leaves, 6 inches long, and large showy yellow and brown flowers. Altogether it grows from 3 to 4 feet high. Flowered in the garden of the Horticultural Society in May and June, from seeds purchased of Mr. James Drummond, and it now seems likely to go on producing its blossoms for two months longer.

UPON THE COLLECTING HAIRS OF CAMPANULA.

There are the following very interesting observations upon this curious subject, by M. Adolphe Brongniart, in a recent number of the Annales des Sciences.

"It has long been known that the external surface of the upper part of the style and of the stigmatic arms of Campanulaceous plants is covered with long hairs, which are very visible in the bud, before the dispersion of the pollen, and which are regularly arranged in longitudinal lines in direct relation to the number and position of the anthers.

"These hairs and their connection with the pollen, at first remarked by Conrad Sprengel in several species of Campanula, and afterwards by Cassini, with more care, in *Campanula rotundifolia,* have been observed by M. Alphonse DeCandolle in the whole Campanulaceous order, with the exception of the small genus *Petromarula.* At the period of dehiscence of the anthers, before the expansion of the corolla, and when the arms of the style are still pressed against each other in the form of a cylinder, these hairs cover themselves with a considerable quantity of pollen, which they brush, so to speak, out of the cells of the anther; and for this reason they have been named, like the analogous hairs in Compositæ, Collectors.

"At the period when the flower expands, the arms of the style, or stigmata separate, and curve backwards, and the anthers that surround them retire and shrivel up, after having lost all their pollen; but at the same time the pollen which was deposited on the outside of the style, detaches itself, and the hairs that covered the surface disappear.

"This led Cassini to call these hairs deciduous, and to say that they disappear at the same time with the pollen which they retained. There then remains, he says, upon the style, nothing more than little asperities."

M. Alphonse DeCandolle is yet more explicit. He expresses himself thus, "the arms of the style begin to diverge. At the same time the pollen disappears, the collecting hairs drop off, and the style becomes altogether smooth."

Nevertheless a microscopical examination of these hairs has satisfied me that they do not fall off, but that they offer a phenomenon of which I know no other example in the vegetable kingdom. They are retractile like the hairs of certain Annelids, or the tentacula of snails.

If we examine a thin longitudinal slice of a young style, before the emission of the pollen, it is seen that these cylindrical hairs, a little tapering to their fine extremity, are formed by an external lengthening of the epidermis, and that they are perfectly simple, without articulation or partitions even at their base.

Immediately below the base of each hair, there exists in the subjacent cellular tissue a cavity about equal in depth to half or a third the length of the hair, continuous with its cavity, and apparently filled with the same fluid. This cavity however does not extend beyond the most superficial stratum of the style or stigma, and has no relation to the tissues situated deeper, of which mention will be made presently.

This arrangement is preserved up to the time of the expansion of the flower, the hairs being at that time covered by grains of pollen, applied over their surface, and held between their interstices.

But at this period the hairs return into the cavities formed at their base among the cellular tissue; the terminal half ensheathes itself in the half situated next the base, as it by degrees is returned into the cavity. The point only of the hair remains projecting beyond the surface of the style, and causes the asperities noticed by Cassini. Sometimes the hair, in retracting thus within itself, draws with it a few grains of pollen, which thus appear to penetrate the tissue of the style, but which in fact are always on the outside of the hair. With care these hairs may be pulled out again by the point of a needle, and then the pollen-grains which appear to have penetrated the style are immediately expelled. Such pollen-grains undergo no change during their application to the collecting hairs, nor even when they are drawn inwards by the latter during their act of retraction.

There is therefore no communication between them and the interior of the style.

As to the immediate cause of this retraction of the hairs, without pretending to give a certain explanation of it, I think it may be ascribed to the absorption of the liquid contained both in the hair and in the cavity at its base, an absorption, the effect of which will be to pull back the hair into the cavity, at least I see no other part whose action can produce the phenomenon.

An examination of the structure of the external stratum of the style and stigmatic arms, has already tended to show the baseless character of the opinion held by those physiologists, who think that fertilization can take place by the action of the pollen upon this part; an opinion offered with doubt by Cassini, and Alphonse DeCandolle, admitted on the contrary in the most positive manner by Treviranus, who, in his Physiology, vol. ii. p. 343, considers the internal stigmatic surface to be formed of papillæ analogous to those which sometimes terminate the petals, while, according to him, the hairs covering the external surface of the style and stigma, perform the part of the stigmata. Link (Philosophia Botanica, 2nd edition, vol. ii. p. 222), also admits that fertilization takes place by these hairs, whose points he says are destroyed while the base remains, and so present a large opening which leads into the style.

We therefore see that the most distinguished Botanists entertain opinions either doubtful or contrary to the most probable analogies. Nevertheless in dissecting the true stigma of Campanulas, that is to say, the inner face of the stigmatic arms, after their divergence, we find that the grains of pollen scattered over the surface adhere to it, as to all true stigmas, first by aid of the fluid that lubricates them, and finally, by the production of pollen-tubes which penetrate it, and soon mark a cord of long soft vesicular tissue, which occupies the centre of the style.

This cord of conducting tissue, of hexagonal form, in the true Campanulas, whose stigma has three arms, is perfectly distinct from the surrounding tissue, much more dense, and coloured; it is easily separated, and is entirely composed of vesicles of a cylindrical or somewhat fusiform figure, very long, colourless, quite separate at the sides, articulated to each other, end to end, and containing very small regular globules of starch, becoming blue upon the application of iodine. The pollen tubes which penetrate between the utricles of this tissue are easily distinguished by being much finer, unarticulated, and filled with very fine indistinct granules.

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120. BLĒTĬĂ *secŭndă*; foliis oblongo-lanceolatis acuminatis 7-nerviis, floribus racemosis, sepalis petalisque herbaceis subæqualibus cuneato-oblongis secundis collateralibus, labelli trilobi laciniis lateralibus nanis erectis intermediâ membranaceâ obovatâ emarginatâ margine inflexâ secus medium bilamellatâ.

Flowers green slightly dotted with crimson, with a straw-coloured labellum. A species of no beauty, imported from Mexico by Messrs. Loddiges. It is remarkable for the sepals and petals being all directed into a plane parallel with the labellum and overlying the column.

121. TRIGONĪDĬŬM *ringens;* pseudo-bulbis compressis subrotundis, foliis oblongis recurvis coriaceis nitidis, scapo filiformi stricto distanter vaginato foliorum longitudine, perianthio bilabiato: sepalo postico arcuato petalisque oblongis margine revolutis labium superius lateralibus oblongis apice obtuse carinatis inferius formantibus, labelli trilobi nani ciliati pubescentis lobis lateralibus dentiformibus: intermedio revoluto in medio lucido basi callo reniformi anticè obsoletè tridentato aucto, columnâ pubescente.

A singular species of Orchidaceous plant, forming dense patches of fine vigorous deep green pseudobulbs and leaves, promising something much better than the little insignificant scentless yellowish-green flower which they produce. The latter stands singly at the end of a very slender erect scape, and is distinctly divided into two lips. The labellum is very finely downy, ciliated at the edge, and slightly bearded along four of the veins near its base on the upper side. The column is moreover downy, and has a small collection of minute shining hairs near its base. The species was introduced from Mexico by Mr. Hartweg; but had been previously discovered in shady places in the Barranca de Tioselo, by Schiede, whose MS. description, together with a specimen, has been obligingly communicated to me by Prof. Schlechtendahl, and is here subjoined.

Fol. calycina omnia libera, 5, patentia, obscure flavescentia, lineis atropurpureis percursa, oblonga; 3 galeam formantia conniventia, 2 lateralia externa obliquiuscula deflexa. *Labellum* liberum erectiusculum, basi parum angustatum, reliquis calycinis foliolis multo brevius, trifidum, lobo intermedio multo longiore, apice reflexo, atropurpureum, in medio laminæ trituberculatum. *Gynostemium* labello paulo brevius, erectiusculum, paulo anterius curvatum, non alatum. *Anthera* terminalis anticam partem apieis truncati occupans. *Operculum* univalve transverse sese solvens, valde deciduum. *Corpuscula pollinifera* 4, 2 anteriora labello propriora majora, posteriora minora, omnia membranulæ lunatæ insidentia, sine pedicello; membranulæ cornua in anteriore parte gynostemini affixa sunt.—*Schiede mss.*

122. EPIDĒNDRŪM (Encyclia) *bractēscēns;* pseudobulbis ovatis cæspitosis 3-4-phyllis, foliis linearibus, scapo debili 3-4-floro, bracteis infimis foliaceis floribus longioribus supremis obsoletis, floribus nutantibus longè pedunculatis, sepalis petalisque lineari-lanceolatis acuminatis discoloribus labello longioribus, labelli liberi lobis lateralibus apice recurvis obtusis subdentatis intermedio unguiculato subrotundo-ovato multò longiore secus unguem elevato sulcato pubescente.

This is one of the prettiest of the small species of Epidendrum, and is quite distinct from all hitherto described. Mr. Hartweg found it in Mexico in the vicinity of Oaxaca. The pseudobulbs are exactly ovate, closely clustered, and about as large as a pigeon's egg. The flowers have a beautifully but delicately painted white lip, the gay effect of which is heightened by the contrast with the dingy purple of the long narrow sepals and petals. Its nearest affinity is with *E. papillosum* and *E. pastoris* of Link and Otto, the *E. Linkianum* of Klotzsch. The flowers have no smell.

123. SARCĀNTHŪS *oxyphy̆llŭs.* Wallich mss.

This plant, which has been lately received from Calcutta by several persons, has flowered in the garden of the Horticultural Society, and proves to be nothing more than a narrow-leaved variety of *Sarcanthus rostratus*, a species of no beauty, long since introduced by the Horticultural Society from China.

124. SĒDŪM *multicāulĕ* (Wall. mss.); caulibus plurimis erectis glabris ramosis apice 3-partitis, floribus secus ramulos sessilibus unilateralibus, foliis linearibus adnatis acuminatis apiculatis carnosis, sepalis 5 foliaceis petalis luteis longioribus, squamulis hypogynis retusis.

This native of the Himalaya Mountains, where it appears to be very common, has been obtained by the Horticultural Society from seeds presented by the Honourable Court of Directors of the East India Company. It is a perennial with deep green fleshy leaves and pretty starry yellow flowers, and if hardy, as appears probable, will make an excellent plant for rockwork. The branches are about a foot or more long, but in consequence of their spreading habit they do not appear more than 6 or 9 inches high even in rich soil.

125. STANHŌPĔĂ *gravĕŏlēns;* petalis ovato-lanceolatis undulatis basi carnosis, labelli hypochilio sub-compresso saccato intus glaberrimo antice bidentato et inter dentes profundè sulcato, metachilii cornubus acuminatissimis incurvis, epichilio subrotundo-ovato integerrimo, columnæ apice truncato-bilobæ alis latissimis subquadratis.

This is a noble species with the habit and general appearance of *S. saccata*, but far handsomer. The sepals and petals are of the most delicate straw colour; the lip at the base, and the central parts of the flower generally, are of a deep rich apricot yellow, while the horns and upper end of the lip are like ivory turning yellow. It differs from *S. saccata* in its hypochilium being much deeper from front to back, the petals smaller, the epichilium entire, and the column much more broadly winged. It was purchased from Mr. Tate who imported it from Peru, by the Hon. and Rev. W. Herbert, who informs me that its leaves are 4 inches wide, and 17 inches long besides the petiole, which is 2½ inches long, acute with seven strong ribs. Its odour is so powerful that it communicates itself to the fingers after touching the flowers, and like many other smells, though agreeable in itself, is offensive from its intensity.

126. APŎRŪM *Leōnĭs;* (A indivisum *Gen. & Sp. Orch. p.* 70. nec Blumii) foliis coriaceis ovatis v. brevissimè cultratis obtusis, floribus solitariis terminalibus, labello lineari-oblongo emarginato ecristato apice ciliato-dentato et minutissimè pubescente.

A native of Sincapore, where it was originally found by Mr. Prince, who communicated it to Dr. Wallich with a rude drawing, upon which it was admitted by me into the *Genera and Species of Orchidaceous plants* as synonymous with the *A. indivisum* of Dr. Blume. It having lately been brought home from the same place in a living state by Mr. Cuming, under the name of "Lion's mouth," and Messrs. Loddiges having sent it to me in flower, I am now able to state that it is in reality a species distinct from that of Blume, in its labellum not having a transverse crest, and probably in other circumstances. It has therefore received a name in allusion to that just mentioned, which has arisen from a fancied resemblance between the reddish brown ringent flower and the narrow blunt undivided lip, which are compared to the jaws and tongue of a lion. However, notwithstanding this high sounding comparison, the plant is of no beauty.

127. CLEISŌSTŎMĂ *latifŏlĭūm ;* foliis oblongis obtusis apice subæqualibus bilobis, floribus paniculatis: ramis simplicibus rigidis, petalis sepalisque linearibus obtusis, labelli calcare ventricoso laminâ reniformi dente membranaceo bilobo.

A Vanda-like Orchidaceous plant from Sincapore, for which I am indebted to Messrs. Loddiges. It is very like *C. maculosum*, but has broader leaves, and there are differences in the form of the labellum, &c. Its flowers are yellow bordered with red, small and densely arranged. It is pretty, but not strikingly so.

128. EPIDĒNDRŪM (Amphiglottis) *Trinitātĭs;* caulibus foliosis ancipitibus, foliis lineari-lanceolatis glaucescentibus apice obtusis obliquè emarginatis, racemo terminali nutante pedunculato basi vaginis herbaceis equitantibus imbricato, sepalis petalisque lineari-lanceolatis, petalis piliformibus, labelli lobis lateralibus concavis denticulatis intermedio lineari-lanceolato acuminato basi 3-calloso.

Flowers small, in a long raceme, pale greenish yellow, with a deep apricot-yellow lip. Not very ornamental, but pretty. I owe my knowledge of it to Messrs. Loddiges, who imported it from Trinidad.

129. TRIPTĬLĬŌN *spinōsūm.* Fl. Peruv. syst. 1. 185.

It is probable that the most beautiful herbaceous plants in Chile are a blue *Tropæolum* (*azureum*) and this *Triptilion spinosum*, another blue-flowered perennial, whose intense colour more resembles that of Lapis Lazuli than any flower that I remember. It belongs to the Composite order, among the Labiate series, grows about six inches high, has hairy stems divided into numerous branches, which are disposed in a corymbose manner, and terminated by small heads, each containing five florets, the scales of whose receptacle, long, feathery, and snow-white, form a bed of down, upon which the brilliant corollas repose. A figure of this species, for which

I am indebted to Mr. Frost, the excellent gardener of Lady Grenville at Dropmore, will speedily appear in the present work.

130. CHY̆SĬS *lǣvĭs;* bracteis brevibus ovatis pedicelli longitudine, sepalo dorsali lineari-oblongo lateralibus acuminatis, petalis falcatis, labelli lobis lateralibus falcatis apice rotundatis supra columnam convergentibus intermedio membranaceo crispo subrotundo emarginato lamellis 5 carnosis glaberrimis parallelis lateralibus minoribus, columnâ basi altè excavatâ.

Of this singular Orchidaceous genus two new species have appeared in the collection of Mr. Barker. The present has very large yellow flowers, whose lip is spotted with dull brown, and more membranous than in the others; and it is remarkable for its column becoming hard and very tumid after fertilization has occurred, and eventually acquiring a green colour. The other species has white flowers, with a deep yellow fleshy lip, which is divided into two lobes, each folded twice, so as to give the whole the appearance of being four-lobed. It may be named and defined as follows:

131. CHY̆SĬS *bractēscēns;* bracteis cucullatis venosis foliaceis ovario longioribus, sepalis petalisque ovatis obtusis, labelli lobis lateralibus obtusis intermedio carnoso bilobo plicato lamellis 5 carnosis subæqualibus parallelis basi pubescentibus, columnâ latissimâ carnosâ cymbiformi anticè pubescente.

132. PĪNŬS *filĭfŏlĭă;* ramis rigidis crassis, gemmæ squamis linearibus acuminatissimis longissimè ciliatis, foliis quinatis longissimis (1½ pedalibus) acutè triquetris: vaginis longis glabris persistentibus, strobilis conicis elongatis obtusis (7-8-unc.) squamarum apicibus rhombeis depresso-pyramidatis apice callosis obtusis.

Seeds of this magnificent new Pine have lately been received by the Horticultural Society from Mr. Hartweg, who collected them on the Volcan del Fuego in Guatemala. The leaves are longer than in any species previously discovered; and the branches are as stout, or stouter, than those of *Pinus palustris.* It is in distribution by the Horticultural Society; but it is to be feared that it will not prove hardy.

133. PĪNŬS *Coultērī.* (Lambert. mss. D. Don in Linn. Trans. 17. p. 440.)

I notice this plant for the purpose of correcting an error that has found its way into works on Pines, and of which I have just been made aware by Mr. Lambert. It is stated by Mr. Loudon, in his Arboretum Britannicum, and his statement is supported by the authority of Professor Don, that a

Californian Pine, discovered by Douglas, and distributed by the Horticultural Society under my name of *Pinus macrocarpa*, is the same as *P. Coulteri*, a plant of which specimens were brought by Dr. Coulter from the same country, but of which no seeds have grown. I find, however, upon comparing Mr. Lambert's specimens of *P. Coulteri* with those of *P. macrocarpa* that this is by no means certain, and that in reality the two species are probably different. The cone of *P. Coulteri* is twice as long as broad, namely, twelve inches by six; and its scales, which are generally directed upwards, have a long, sharp, ovate, or lancet-shaped extremity, which is suddenly narrower, and always perceptibly, often considerably longer than the compressed base. In *Pinus macrocarpa* on the contrary the cone is rounder, and the scales, which are always recurved, have a shorter extremity, which narrows very gradually, and is usually shorter than the compressed base. In *Pinus Coulteri* the leaves are much more short, stout, and stiff than in the other, and the sheath at their base is composed of loose distinctly imbricated scales; in *P. macrocarpa*, on the other hand, the scales forming the sheath are compactly arranged, and their imbricated character is not perceptible at first sight. They are both remarkable for the hardness and heaviness of their cones; I find Mr. Lambert's unripe cone of *P. Coulteri* weighs 3 lbs. 12 oz. and that of *P. macrocarpa* belonging to the Horticultural Society 4 lbs.

The wood-cut in Mr. Loudon's *Arboretum* and *Fruticetum Britannicum*, p. 2251. fig. 2146. is a good representation of *P. Coulteri;* but the description appears to be made up in part from that species and in part from *P. macrocarpa.*

The true *P. Coulteri* seems then to be still a desideratum in our gardens.

NOTE UPON VICTORIA REGIA.

Our readers will be glad to know that living plants of this vegetable prodigy have reached Demerara in safety, and that they may soon be expected in England; Mr. Schomburgk having taken measures to insure their speedy arrival. That they will prove as capable of cultivation as other tropical plants of the Nymphæaceous order cannot be doubted; but it is also probable that it will be absolutely indispensable to their health that the water in which they are grown should be heated artificially, so as to ensure for their roots the temperature to which they are naturally exposed, and which cannot be estimated at less than 80° during the season of growth.

Having thus adverted to VICTORIA, I trust I may be permitted to avail myself of this opportunity, for making a remark or two upon certain statements concerning it which have appeared in the *Annales des Sciences Naturelles* for January of the present year. The authors of these statements are Messrs. Guillemin and D'Orbigny, and their object in putting them forth is evidently that of shewing that if I first published it I did not know how to describe it, and of claiming for the latter traveller the credit of having first discovered it.

M. Guillemin states that M. D'Orbigny, in the year 1828, sent dried specimens of the flowers and fruit to the Museum at Paris, and that "cette plante avait de si grands rapports avec *l'Euryale* que les botanistes du Jardin de Paris n'hesitérent pas à la considérer comme sa congénére;" the remainder of M. Guillemin's memoir seems intended to shew that in fact, although not an *Euryale*, VICTORIA is more nearly allied to that genus than to *Nymphæa*, and he blames me for not being of the same opinion. "Au lieu," says M. Guillemin, "d'indiquer légèrement les rapports du VICTORIA avec *l'Euryale*, et d'insister sur ses différences avec le *Nymphæa*, M. Lindley aurait dû nous dire en quoi il diffère essentiellement de l'*Euryale*." This is rather an amusing complaint from a gentleman who after all admits that VICTORIA is not an *Euryale*, which he tells us that the botanists of the French Museum always supposed it to be, till they were set right; and it is the more curious since I have in fact distinctly stated that which M. Guillemin complains of my having omitted to state; as he will see if he will refer to the Botanical Register for 1838, where, at p. 12 and 13 of the miscellaneous matter, the whole question is considered systematically, and a much more detailed account of the organization of the flower is given than what M. Guillemin has favoured us with. The only additional remark that I find it necessary to make upon M. Guillemin is this; he attaches great value to a rostrate process that rises up from the centre of the apex of the fruit in VICTORIA, and he regards it as the most important mark of distinction between that genus and *Euryale*. This may be; but if so, it furnishes an argument which he has overlooked, *against* the affinity of VICTORIA with that genus, and in *favour* of its affinity with *Nymphæa,* in which the same process exists.

M. D'Orbigny's memoir, occupying five pages, professes to be on the species of the genus VICTORIA, and he says that in addition to *V. regia,* there is a second species, called by him *V. Cruziana;* he gives for the two supposed species what he terms distinctive phrases, duly written in Latin, in the form of specific characters, upon the most approved plan, each occupying four printed lines. This array of technical terms only means however, being interpreted, that *V. regia* has the leaves purple on the under side, and the external petals white, with the interior red; while *V. Cruziana* has the leaves green on each side, and all the petals red. Let it not be supposed however that five pages, and so much learning are expended upon so mean a result. M. D'Orbigny's real object is to give an account of his own discoveries, and to complain of their having been anticipated by me in this country. In what way however any blame attaches to me I am at a loss to understand. The plant was discovered in an English Colony, by a distinguished naturalist in English pay, and by him it was communicated to me for publication: I knew nothing of M. D'Orbigny, or of his discoveries, nor does he pretend that I did. But he says that he sent home specimens to Paris in 1828, only his friends at Paris did not make them known; that he *talked about* his "belles plantes" to M. Adolphe Brongniart, in 1834; that in 1835, at p. 289 of the "relation historique" of his travels, "il a indiqué *sommairement* sa découverte, *sans lui imposer de nom botanique;*" and that he "eprouvait une veritable peine" when he found in 1837 that his plant was published by me with the "nom pompeux" of VICTORIA REGIA. In answer to all which I humbly submit to M. D'Orbigny that his specimens were not sent to me; that I am not M. Adolphe Brongniart; that I am very sorry for his distress of mind; and that le nom pompeux de Victoria is the name of the Queen of England.

134. ¶ EPIDĒNDRŪM *densiflōrūm.* Hooker in Botanical Mag. t. 3791.

This plant, with densely spiked, panicled flowers of a greenish yellow colour, relieved by a white 4-lobed lip, appears to be the same as the E. *floribundum* of Humboldt and Kunth.

135. ¶ CATASĒTŪM (monachanthus) *roseo-album;* labello triangulari acutissimo concavo-hemisphærico (non ventricoso) intùs pubescente margine basi longissimè ciliato. *Hooker in Botanical Magazine, t.* 3796. sub Monachantho.

A pretty species from Para, which has flowered in the Botanical Garden, Glasgow. The flowers are described as delicate, of a white colour, with a lip tipped and banded with red; but they are represented as greenish yellow. As the genus *Monachanthus* is suppressed I am obliged to alter the designation under which the plant has been published in the Botanical Magazine. It is very near *Catasetum* (Monachanthus) *discolor.*

136. ¶ CATASĒTŪM (Myanthus) *spinōsūm;* petalis versus apicem serratis, labelli infra medium saccati margine pilis tenuibus succulentis albis longè fimbriato apice angustè attenuato recurvo supra ad basin spinâ tripartitâ infra apicem spinâ magnâ dentatâ porrectâ. *Hooker in Botanical Magazine, t.* 3802. sub Myantho.

Found by Mr. Gardner in the province of Ceará in Brazil, and very nearly the same as *Catasetum* (Myanthus) *barbatum,* from which its brighter coloured and larger flowers, serrated petals and horned labellum seem to distinguish it sufficiently. From the Glasgow Botanic Garden.

137. ONCĪDĬŪM *Huntiānūm.* Hooker in Botanical Magazine, t. 3806, is the same as *O. sanguineum,* Sertum Orchidaceum, t. 27.

138. ONCĪDĬŪM *pachyphȳllūm.* Hooker in Botanical Magazine, t. 3807, is the same as the *O. Cavendishianum* of Mr. Bateman's Orchidaceæ of Mexico and Guatemala, t. 3.

139. ¶ ZYGOPĔTĂLŬM *africānūm.* Hooker in Botanical Magazine, t. 3812.

This, which was sent to Sir Wm. Hooker from Woburn as a Sierra Leone Orchidaceous plant, is certainly American, and in all appearance is a pale variety of *Odontoglossum Bictoniense,* the *Cirtochylum Bictoniense* of Mr. Bateman's work.

140. AQUILĔGĬĂ *frāgrāns;* caule folioso plurifloro supernè foliis superioribus ovariisque pubescentibus subglandulosis, foliorum inferiorum segmentis ultra medium trifidis, floribus amplis (albidis odoratis) vix puberulis, sepalis ovato-lanceolatis acutis, petalorum calcaribus incurvo-hamatis laminâ truncatâ duplo brevioribus, staminibus laminâ parum brevioribus. *Bentham mss.*

A hardy perennial from the North of India, with pale straw-coloured sweet-scented flowers, and in general appearance very like *A. glauca* of this volume, t. 46, from which it differs in having green leaves, and the spurs of the flowers strongly curved inwards instead of being straight.

141. AQUILĔGĬĂ *pubiflōră;* (Wall. cat. no. 4714. Royle's Illustrations of the Himalaya Mountains, p. 35.) caule folioso plurifloro pubescente sub calyce tomentoso, foliis viridibus subtùs petiolisque pilosiusculis, foliolis cuneatis trilobis: laciniis truncatis rotundatis crenato-incisis, floribus (purpurascentibus inodoris) pilosiusculis, sepalis acuminatis apice herbaceis, petalorum calcaribus circinatìm involutis, ovariis glabriusculis, staminibus laminâ parùm brevioribus.

Another hardy perennial from the same country as the last, and, like it, procured by the Hon. Court of Directors of the East India Company. It grows about a foot high, has dull pale purple scentless flowers, and is a much less handsome plant. According to Dr. Royle it is abundant among the Himalaya mountains at elevations of from 6000 to 10,000 feet.

142. HARDENBĒRGĬĂ *dīgitātă;* foliis digitatis, foliolis ovato-oblongis obtusis terminali longiùs petiolato, racemo pedunculato denso cylindraceo erecto foliis multò longiore.

A handsome greenhouse twiner, raised from Swan River seeds in the garden of H. R. H. the Duchess of Gloucester, by Mr. Toward, under whose skilful management so many new species have been introduced. It has smaller flowers than H. Comptoniana, but they are more numerous, and I think quite as beautiful. It will be figured in the present volume of the Botanical Register.

VANILLA.

That the aromatic fruit which bears this name has been procured in abundance by Professor Morren, at Liege, from plants under cultivation, is probably known to most Horticultural readers; but I am not aware of any one in this country having met with the like success until Mr. Henderson, the skilful gardener at Lord Fitzwilliam's seat at Milton, accomplished the object, by means of artificial fertilization, in the same manner as Professor Morren. In April last Mr. Henderson sent me flowers of Vanilla planifolia, accompanied by ripe fruit which appeared to be quite as fragrant as those imported from Mexico, and they proved as fit for the purposes of flavouring ices and creams. From the letter that accompanied the specimens I extract the following account:—

"Our plant of *Vanilla planifolia* has produced flowers—but no fruit—for several years. Last year in the No. for March of the Annals of Natural History, I saw Professor Morren's paper on the production of Vanilla in Europe, and having followed the directions therein given for its artificial fecundation, I succeeded in getting a number of the fruit to set,—they have been about a year in coming to maturity. Professor Morren says twelve months and a day is the exact period.

"The artificial fecundation consists in carefully removing the retinaculum, which covers the stigmatic portion of the column and separates it from the anther. The anther, which is turned inwards, must then be drawn out and pushed down, until it comes in contact with the bearded stigmatic part of the column. As the flowers are of short duration, those which are now sent will probably be withered before they reach you: they may however be brought out in succession for some time, by planting the branch in a pot among earth, and keeping it in a stove, or perhaps in a warm room. In a stove I had a branch last year, which brought out flowers in succession for three weeks."

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143. SARCOCHĪLŬS *unguiculātŭs;* racemo 3-4-floro, labelli unguiculati trilobi ungue convexo lineari lineâ mediâ exaratâ, laminâ cavâ, lobis lateralibus semi-ovatis obtusis intermedio supra trinervi subtus globoso apice papillæformi.

A native of Manilla, where it was discovered by Mr. Cuming. The flowers are light straw-colour, the side lobes of the labellum white streaked with crimson, and the middle lobe rounded, fleshy, and dotted with crimson. It is rather a pretty species, for which I am indebted to Mr. Bateman.

144. ANAGĀLLĬS *alternifŏlĭă.* Cavanill. ic. t. 506. f. 2.

A very pretty little herbaceous plant, with trailing shoots, covered with ovate leaves, and delicate yellowish flowers tinged with pink. It belongs to the section *Jirasekia*, and is nearly allied to the charming *Anagallis tenella* of our own bogs. It was raised at Carclew from earth sent from Rio Janeiro, and I owe specimens to the kindness of Sir Charles Lemon. The leaves smell something like Valerian. I find no distinction between it and my wild specimens of the species from Chile. It will be a good addition to our small stock of rill-plants from the tropics.

145. MAXILLĀRĬĂ *Skinnĕrī.* Supra no. 101.

This species, already noticed at the place above referred to in the present volume, has flowered with Sir Charles Lemon at Penrhyn. It has very much the appearance of a large form of *M. aromatica*, but the structure of the flowers is different. They are a deep dull yellow. The lip is a dull olive-brown except the middle lobe, and the column is a little variegated with crimson. I find nothing to correct in the specific character already given from the dried specimen.

146. PLEUROTHĀLLĬS *pachyglōssă;* folio ovato-lanceolato apice tridentato caule suo longiore scapo breviore, scapo filiformi erecto distanter 4-floro, sepalis lineari-lanceolatis acuminatis membranaceis inferiore bicarinato bidentato, petalis carnosis obovatis convexis trinerviis apice rotundatis dorso sub apice verrucosis, labello petalis duplò longiore unguiculato crassissimo obtuso linguiformi basi auriculis duabus membranaceis aucto medio villoso dorso verrucoso.

This is the largest flowered species I have yet seen in the genus. It has purple semitransparent sepals six lines long, and about four flowers on a slender scape, divided from each other by intervals of nearly an inch. It stands next *P. fusca* and *ephemera.* Mr. Barker imported it from Mexico.

147. STANHŌPĔĂ Wārdĭī. *Sertum Orchidaceum, t.* 14.

Of this fine species several varieties are now in the gardens, among which an exceedingly handsome one is that named *S. Barkeri*, without the eye-like spots, and with the anterior part of the lip of a delicate ivory white. Of this the fragrance is very agreeable, which is more than can be said of *S. Wardii* itself and some of the other varieties, of which I now fear even *S. graveolens*, no. 125, is one, so many forms have I examined within the last few weeks.

148. BRACHY̆CŎMĒ iberidifŏlĭă. *Bentham in Plant. Hugel. enum. p.* 59.

A beautiful little hardy annual of the Composite order, with finely cut leaves like those of a Nigella, and flowers of the deepest blue. It has been raised from Swan River seeds by Mrs. Wray of Cheltenham, and is a most welcome addition to our gardens. The stem grows a foot high or less, according to the soil. There is a white variety at the Swan River.

149. HIBĪSCŬS (Azanza) *Wrāyǣ;* caule fruticoso tomentoso, foliis palmatis cordatis tomentosis: lobis obovatis pinnatifidis laciniis rotundatis subcrenatis, pedunculis axillaribus bifloris foliis longioribus, involucello 15-dentato, stigmatis laciniis linearibus revolutis.

For this also we are indebted to Mrs. Wray of Cheltenham, after whom it is named. It was raised by that Lady from Swan River seeds, and is a handsome greenhouse shrub, with fine large lilac flowers. The leaves are palmate, bright green, with roundly pinnatifid lobes. The corolla is as much as five inches across, and very showy. It is next to *Hibiscus Hugelii*; from which it differs in the form of the leaves, the toothing of the involucre, the form of the stigma, and the colour of the flowers, which, in that species, are yellow with a purple eye.

150. OXYĀNTHŬS *versĭcŏlŏr;* foliis ovali-lanceolatis utrinque acuminatis glabris, corollis decurvis versicoloribus: laciniis linearibus secundis staminibus parum longioribus, filamentis antheris subæqualibus.

This is a beautiful stove shrub, introduced from Cuba by Messrs. Loddiges. The flowers are sweet-scented, and have a slender tube four inches long; when they first appear they are quite white, but they change gradually to pink, and at last assume a deep rose colour or crimson.

151. ANGRÆCŪM *bĭlŏbūm;* caule brevissimo, foliis cuneato-obovatis oblique bilobis reticulatis racemo verrucoso pendulo multifloro multò brevioribus, sepalis petalisque lanceolatis patentibus, labello conformi paulò majore calcare filiformi emarginato breviore.

A lovely Orchidaceous plant, with long drooping racemes of snow-white flowers, just tipped with pink, and slightly sweet-scented. It has singular, netted obovate leaves, cloven at the point, and slightly sprinkled with small tubercles. It was imported by Messrs. Loddiges from Cape Coast Castle.

152. EPIDĒNDRŪM *lancĭfŏlĭūm.* Lindl. Gen. & Sp. Orch. p. 98.

This plant has been imported from Mexico by Messrs. Loddiges, with whom it has flowered. It is very like *E. cochleatum*, but its lip is striated with deep purple radiating lines upon a pale yellow ground. It has a slight perfume.

153. DENDRŌBĬŪM *herbācĕūm;* caulibus ramosis teretibus glabris, foliis lineari-lanceolatis acuminatis apice obliquè bilobis, racemo paucifloro terminali, sepalis lateralibus basi paulo productis dorsali petalisque linearibus, labello lanceolato integerrimo nudo, clinandrio biauri.

A small branching Orchidaceous plant, with leaves from two to three inches long, and inconspicuous green flowers. It was imported from the East Indies by Messrs. Loddiges.

154. ONCĪDĬŪM *ramōsūm.* Lindl. in Bot. Reg. sub fol. 1920.

A very fine species, which has flowered with Messrs. Loddiges, imported from Gongo Soco in Brazil. It has gay pale flowers in a branched panicle, already a foot square, upon a scape five feet high, and in its native state the inflorescence is much larger. Several finger-like streaks of brown radiate from the base of the tuberculated crest, whose elevations are disposed in two tiers, the upper consisting of five short wavy ridges, and the lower of two, with a truncated four-lobed tubercle between them.

155. MAXILLĀRĬĂ *Maclēī;* sub-caulescens, pseudobulbis confertis oblongis monophyllis subcompressis, foliis aciculatis, pedunculis axillaribus solitariis basi squamatis, floribus rectis, sepalis ovato-lanceolatis acutis conniventibus, petalis multò brevioribus acutis paululùm recurvis, labello oblongo indiviso margine plano apice haud reflexo, callo disci oblongo integro. *Bateman in litt.*

"This plant is nearly related to, but undoubtedly distinct from, *M. tenuifolia;* the only species with which it is necessary to contrast it. The following are the more prominent marks of distinction. The pseudo-bulbs of *M. Macleei* in form are a true oblong, instead of tapering as do those of *M. tenuifolia;* the leaves too of the former are not more than one-third the length of those of the latter. In *M. tenuifolia* the sepals and petals have their edges recurved, in *M. Macleei* they are perfectly plane; again, in *M. tenuifolia* the sepals are turned backwards, and the petals are connivent, whereas in *M. Macleei* it is exactly the reverse; the lip moreover of the latter is not recurved. The colouring of the two plants is also different, the sepals and petals of *M. Macleei* being internally of a uniform rich reddish brown, and its lip whitish, with intense maroon spots, while in *M. tenuifolia* there is a considerable admixture of yellow, both in the sepals and petals, and in the lip.

"The species is a native of the inland parts of Guatemala, whence it was sent to me in the spring of the present year, by my indefatigable correspondent Mr. Skinner, after whose worthy partner, Mr. M^{c}Klee, I have much pleasure in naming it; the more particularly, as it is to his exertions that

I have frequently been indebted for the safety of his friend's collections."—*Copy of a note from Mr. Bateman.*

156. SCHIZONŌTŬS *tomentōsŭs.* (Spiræa Lindleyana, *Wallich cat. no.* 703.)

A handsome and new hardy shrub, from the cold northern provinces of India, introduced by the East India Company, and recently raised in the Garden of the Horticultural Society. It has the habit of Spiræa sorbifolia, but has downy leaves, and the flowers, with which I am unacquainted, appear from the fruit-bearing specimens, to be produced in very large panicles.

The genus Schizonotus was merely mentioned in Dr. Wallich's catalogue, as one which I proposed to form upon this species and Spiræa sorbifolia. It has since been regarded by Meisner *(tab. gen. diagnost. p.* 103), as a section of Spiræa, without his being aware of the character on which I conceive the genus to be established. I may therefore take this opportunity of stating that, as the name (Splitback) indicates, the character is taken from the remarkable cohesion of the carpels into a 5-celled capsule, whose cells split open at the back for the escape of the seeds. This is I conceive a character of importance enough to eliminate from Spiræa the two remarkable looking shrubs in which it occurs.

157. CATASETUM *deltoideum.* Bot. Reg. fol. 1896. *(Myanthus.)*

In a former volume of this work it has been related how the species of Orchidaceous plant which was called *Myanthus barbatus*, with a revolute bearded lip, and a column with two feelers, changes by a marvellous metamorphosis, into what was also called *Monachanthus viridis*, thus proving not only that the supposed genera *Myanthus* and *Monachanthus* are the same, but that they are mere forms of Catasetum itself. A new case of this kind of variation, previously unheard of and unsuspected in the Vegetable Kingdom, has been observed by Mr. Dunsford, who has brought me a scape of *Catasetum deltoideum*, figured at fol. 1896 of this work, in a similar state of alteration. The scape itself has become three times as stout as usual, the length of the raceme is much reduced, the sepals and petals retain their form and colour; but the labellum, instead of being arrow-headed, flat, deep purple, toothed at the base, and placed in front of the flower, has become of exactly the same form as that of *Monachanthus* *viridis*, hooded, undivided, and of a dull greenish colour tinged with dull purple. The column too, has in like manner lost its cirrhi, has shortened, and its lengthened beak has also disappeared.

158. OPHĔLĬĂ *purpurāscēns.* Don in Edinb. Philos. Mag. 1836. Jan.

A pretty little herbaceous plant, with narrow pale green leaves, and starry pink flowers with green glands at the base of the petals. It is a native of the northern parts of India, and has been recently raised by the Horticultural Society from the important distributions of the East India Company. It may be expected to prove hardy, but will probably be only annual.

159. SPIRÆĂ *rotundifŏlĭă.*

Among a collection of seeds from Cashmere, collected by Dr. Falconer, and presented by the Court of Directors of the East India Company to the Horticultural Society, was this, which, although it has not yet flowered, is evidently a new species of the hardy genus Spiræa, belonging to the same division as *S. vacciniifolia.* It has slender, angular, downy shoots, and roundish oblong blunt leaves crenated at the upper end above the middle, but entire on the lower half; they measure on an average seven lines in length and six in breadth; their petiole is about a line long, and downy. I cannot find such a plant described any where, and it is unquestionably new to our gardens.

160. QUĒRCŬS *acutifŏlĭă.* Humb. & Bonpl. pl. æquin. 2. 55. t. 95.

161. ———— *reticulātă.* Id. Ib. 2. 40. t. 86.

162. ———— *crāssĭpēs.* Id. Ib. 2. 37. t. 83.

163. ———— *spicātă.* Id. Ib. 2. 46. t. 89.

164. ———— *mexicānă.* Id. Ib. 2. 35. t. 82.

165. ———— *glaucēscēns.* Id. Ib. 2. 29. t. 78.

166. ———— *sidērŏxy̆lă.* Id. Ib. 2. 39. t. 85.

167. ———— *lancifŏlĭă.* Cham. & Schlecht. Linn. 5. 78.

168. ———— *petiolāris.* Benth. plant. Hartweg. no. 420.

All the foregoing are Mexican oaks, recently raised in the garden of the Horticultural Society from acorns received either from Mr. Hartweg or the Hon. W. F. Strangways. They are all species with beautiful foliage, and will be a great acquisition to this country if they should prove hardy. This is however uncertain, and it is to be feared improbable, except in the southern parts of England and in Ireland. It may be expected that *Q. sideroxyla*, or the Ironwood Oak, will be the hardiest among them.

169. BETŪLĂ (also Bētŭlă) *Bhojpāttră*. Wall. cat. no. 2792. Pl. As. rar. 2. p. 7.

This Birch, the finest of the Himalayan species, has at length been introduced by the East India Company, who presented its seeds to the Horticultural Society. It will doubtless be perfectly hardy, as, according to Dr. Royle (*Illustrations, p.* 343), it, and the other species of that country, occupy the loftiest situations in the mountains.

Dr. Wallich has given the following account of the species in his *Plantæ Asiaticæ rariores, vol. 2. p. 7.*

"The epidermis of this species of Birch is used by the mountaineers instead of paper for writing upon. It is of a very delicate texture, and peels off in large masses, of which great quantities are brought down into the plains of Hindustan, where it is employed for covering the inside of the long flexible tubes of the apparatus used for smoking tobacco, commonly called Hooka. The Sanscrita name of the substance is *Bhoorja;* in the Bengali language, *Bhoorjapattra;* and in the Hindustani, *Bhojpattra.* My worthy friend, Mr. Graves Haughton, Oriental Examiner to the Honourable East India Company, to whom I am indebted for the above synonyms, is of opinion that the word *Bhoorja* is the etymon of *Birch,* and that it is one of the many proofs of the descent of the Saxon part of the English language from the Sanscrita."

At the same time were received seeds of another Indian Birch, which I do not find described among the Himalayan species; it is remarkable for the softness of its round heart-shaped leaves, and has received the provisional name of *B. mollis.* I however suspect it to be a mere variety of the Paper Birch of N. America.

170. SPIRǢĀ *fīssă.*

A name given to a species of Spiræa from Mexico, received by the Horticultural Society from Mr. Hartweg, who transmitted no specimens, but who calls it "a very fine shrub near *S. ariæfolia.*" It is a handsome looking plant, with very angular downy branches, ovate, incised smooth leaves, wedge-shaped at the base, with the lateral incisions usually split into a pair of unequal very sharp teeth. There are no stipules. It is quite distinct from any previously discovered.

171. BOLBOPHȲLLŪM *limbātūm;* pseudobulbis ampullaceis depressis, foliis . . . . , racemo cylindraceo multifloro longè pedunculato, squamis pedunculi sursum nudi duabus distantibus parvis vaginantibus, bracteis minimis, sepalis ovatis obtusis ciliatis, petalis multò brevioribus obovatis margine superiore villoso, labello ovato crasso obtuso petalis longiore basi bidentato : disco lævi nitido limbo scabritie minutâ opacato.

The flowers of this plant are deep dull purple, in a rather loose raceme. The sepals and petals are both fringed with whitish hairs. The labellum is remarkable for being polished in the middle, and surrounded by a broad belt of minute points, which give it an opaque shagreen appearance. Like most of the genus it is a plant of little beauty. Messrs. Loddiges received it from Sincapore.

172. DENDRŌBĬŪM (Desmotrichum) *longicōllĕ;* pseudobulbo compresso in collum longissimum extenso, folio oblongo concavo, flore solitario, ovario filiformi c. pedicello articulato, sepalis petalisque patentibus a latâ basi in acumen lineare attenuatis, cornu brevi conico, labello trilobo : lobis lateralibus nanis margine anteriore crispis intermedio apice ovato plicato crispatoque sublobato, lamellis 2 crispis conniventibus per axin.

A singular *Dendrobium*, belonging to the same section as *D. amplum*, which is remarkable for combining the habit of *Bolbophyllum* with the entire structure of the former genus. The neck of the pseudo-bulb is nearly eight inches long ; the leaf five inches ; the ovary two inches and a half. The flower is pale straw colour, with the ends of the sepals and petals tapering into a fine purple point. Sent to Messrs. Loddiges from Sincapore by Mr. Cuming.

173. CIRRHOPĔTĂLŪM vaginātūm. *Lindl. Gen. & Sp. orch. p.* 59.

Messrs. Loddiges have received this plant from Mr. Cuming, who collected it at Sincapore. It has the pale straw-coloured flowers in heads, with their anterior sepals prolonged into a fine thread nearly two inches long. The pseudo-bulbs are in the form of a truncated pyramid; the leaves coriaceous and emarginate.

174. ONCĪDĬŪM *incūrvūm* (Barker in litt.); pseudobulbis ovatis ancipitibus utrinque tricostatis diphyllis, foliis ensiformibus acutis, scapo elongato racemoso-paniculato, sepalis lineari-lanceolatis undulatis liberis, petalis conformibus incurvis, labelli laciniis lateralibus rotundatis nanis intermediâ subrotundâ concavâ acutâ, cristâ ovatâ depressâ dimidiâ inferiore lineatâ superiore tricostatâ, columnâ apterâ.

A pretty species, with pale pink flowers mottled with white. It has at first sight the appearance of *O. ornithorhynchum*, but it wants the bird's-beaked anther, and the column-wings of that species. Its panicled scape is long, narrow, and about three feet high. It was originally sent me by Mr. Barker, and I have subsequently seen it in the collection of Messrs. Lee and Co. of Hammersmith.

175. PLEUROTHĀLLĬS *seriātă*; folio carnoso plano ovali emarginato caule multò longiore, pedunculo filiformi paucifloro folii longitudine, sepalo dorsali carinato margine reflexo antico latiore acuto emarginato, petalis brevibus spathulatis carnosis lævibus, labello oblongo obtusissimo pubescente medio exarato lobulis lateralibus minimis rotundatis.

An inconspicuous species of this large genus, with pale yellowish-green flowers marked with rows of purple dots. Like all the genus it is a beautiful object when examined microscopically, but to the naked eye it offers no attraction. The Horticultural Society received it from Rio Janeiro, whence it was procured by John Hearne, Esq.

176. CATASĒTŪM *Trūllă*; sepalis petalisque patentibus ovalibus planis, labello latè ovato acuminato obtuso subcordato concavo fimbriato apice lævi, columnâ brevi cirrhatâ.

Flowers about thirty in a spike, green with a brown stain upon the lip. This species is distinct from all previously published, but has little beauty. It was communicated to me by Mr. J. Rigby of the Stanhope Nursery, Old Brompton. A figure will shortly be published in this work.

177. CYMBĪDIŪM *pubēscēns*; foliis ensiformibus striatis apice obliquè bidentatis, racemo brevi pendulo, bracteis minimis squamæformibus, sepalis petalisque linearibus acutiusculis, labelli trilobi basi saccati intùs pubescentis laciniis lateralibus acutis intermediâ oblongâ subundulatâ obtusâ, lamellis rectiusculis medio interruptis.

A beautiful species, collected at Sincapore by Mr. Cuming, and flowered by Messrs. Loddiges. It has a short raceme of rich purple flowers, bordered and spotted with brilliant yellow. It is nearly allied to *C. Finlaysonianum* and *bicolor*, but its flowers are smaller, its raceme shorter, and its downy lip is quite different. A figure will appear in this work.

178. CŒLŎGȲNĒ *Cumīngĭī;* pseudobulbis ovatis, foliis geminis lanceolatis 5-nerviis utrinque acuminatis racemo paucifloro longioribus, scapo basi nudo, bracteis convolutis floribus longioribus, petalis lineari-lanceolatis patentibus, labelli trilobi lobis lateralibus rotundatis intermedio ovato acuto revoluto basi crispo, lamellis 3 crispis continuis.

A beautiful Orchidaceous plant found at Sincapore, and brought home by Mr. Cuming. It has white flowers, with a lip yellow in the middle. It is allied to *C. trinervis.* Messrs. Loddiges have communicated specimens, of which a figure is in preparation.

179. CATASĒTŪM *saccātum;* sepalis lanceolatis patentibus dorsali petalisque fornicatis, labello subrotundo abruptè acuminato fimbriato medio saccato : ostio contracto reniformi postice dentato, columnâ cirrhatâ.

Of all the strange forms presented by the various species of Catasetum this is one of the most extraordinary. It has very large flowers, with rich purple-spotted sepals and petals, and a bright yellow lip covered closely with crimson dots. The latter is pierced in the middle by a narrow aperture, which leads into a conical chamber or bag, which is not observed till the back of the lip is turned up. Messrs. Loddiges obtained it from Guayana. A figure of it is destined for the Sertum Orchidaceum.

180. VALERIĀNĂ *Nāpŭs;* radice maximâ tuberosâ, caule glabro herbaceo, foliis pinnatisectis, segmentis linearibus acutis dentatis integrisque, floribus capitatis vel corymboso-paniculatis, genitalibus exsertis, fructu pubescente.

A half-hardy species of Valerian, with tuberous roots as large as a full-sized field Turnip, said by Mr. Hartweg, who sent it to the Horticultural Society from Mexico, to be used medicinally in that country. No information is however possessed as to the purposes for which it is administered. It is a perennial herbaceous plant, with narrowly pinnated leaves, and small white flowers of no beauty. It is very closely allied to *V. ceratophylla*, found near Chapoltepec by Humboldt and Bonpland; but its leaves are not in any degree hastate at the segments.

181. SOLĀNŪM *macranthērum.* Moç. et Sess. Benth. pl. Hartw. n. 367.

Of this beautiful half-hardy herbaceous plant specimens have been raised by Mr. W. B. Page, Nurseryman, Southampton. It has large clusters of deep purple flowers, and will appear in an early number of this work. It flowered with Mr. Page in August.

182. CATASĒTŪM (Myanthus) *cornūtūm;* petalis maculatis lineari-lanceolatis sepalo dorsali conformi suppositis, labello subcordato-ovato basin versus saccato supra saccum cornu valido inflexo instructo processibus teretibus rigidis fimbriato basi dentato, columnæ acuminatæ cirrhis cornu labelli attingentibus.

A native of Demerara, with the habit of Catasetum barbatum, formerly Myanthus. There are sixteen or more flowers in a raceme, of a dull green, richly spotted with deep blackish purple. The lip is light green, spotted with the same dark colour; above the base it is hollowed out; above the hollow it is furnished with a strong inflexed white horn, which rises from a somewhat rugged base; and the margin is broken up into slender stiff processes, which are evidently an incomplete state of the fringes found on the lip of Catasetum cristatum, barbatum, &c. Communicated by Messrs. Loddiges, (no. 544).

183. CATASĒTŪM *callōsūm;* petalis concoloribus lineari-lanceolatis sepalo dorsali conformi suppositis, labello ovato-oblongo obtuso basin versus saccato supra saccum callo magno (aurantiaco) instructo margine obsoletè crenato, columnæ acuminatæ cirrhis vix ultra callum extensis.

In habit this plant is exactly like Catasetum tridentatum, *var.* floribundum, but its flowers are quite different. The sepals and petals are of a dull reddish brown, without spots; the column is of the same colour, which may perhaps be best compared to that of old spoiled port wine. The lip is green, flat, with a yellow tubercle near the base above the hollow, and a stain of the same colour near the apex. It was imported by Messrs. Loddiges from La Guayra, (no. 553).

184. MYCARĀNTHĒS *oblīquă;* foliis lato-linearibus carnosis canaliculatis apice obliquè emarginatis scapo brevioribus, sepalis lateralibus carinatis, labelli cuneati 5-lobi callo apicali majore axi pube densâ deciduâ farinam referente vestitâ.

A fleshy-leaved plant from Sincapore, with very small white flowers, covered slightly with rusty down. It was imported by Mr. Cuming, and flowered with Messrs. Loddiges, (no. 121).

185. SARCĀNTHŬS *pāllĭdŭs;* foliis distichis coriaceis ligulatis apice obliquè retusis paniculâ multiflorâ ramosâ multò brevioribus, labelli lobo medio solido tereti incurvo.

Brought to His Grace the Duke of Devonshire from India by Mr. Gibson. It is a plant with the foliage of Aerides odoratum, or some such plant; but its flowers are small, pale, and by no means beautiful, although they are extremely numerous, and arranged in a panicle a foot and a half long. They are about the size of *S. teretifolius*, of a dirty greenish white, with a faint purple streak through the middle of each sepal and petal, and with the intermediate lobe of the lip dull yellow.

186. COMPARĒTTĬĂ *rŏsĕă;* foliis subsessilibus, racemo pendulo laxo paucifloro, labelli laminâ subrotundo-oblongâ calcare subulato breviore.

A delicate little Orchidaceous plant from the Spanish Main, with a slender drooping stem, bearing four or five flowers of a bright rich rose colour near its apex. I am indebted for it to Messrs. Loddiges, (no. 752).

Chenopodearum Monographica enumeratio, auctore A Moquin Tandon. Paris, 1840. 8vo.

An important contribution to the progress of systematical Botany, which, if it bears but little upon Garden plants, has at least a material connection with our Domestic Flora.

The Chenopodiaceous order is universally ugly, and generally useless; there is hardly a species that deserves a better place than a heap of rubbish, where indeed they are generally found, as if they really possessed the virtue of humility and knew their station. That kind of affection which leads a man to spend years of his life in contemplating such things, can only be compared to the tender care with which a reptile or a monkey is sometimes caressed. But as such plants must be put in order by some one, in order that all things may find their fitting place in the scheme of classification, the world is much indebted to those who undertake the uninviting office. M. Moquin Tandon appears to have executed it with care. He refers Chenopodium Botrys and its allies to a genus called *Ambrina;* Ch. Bonus Henricus, formerly regarded by him as a peculiar genus (Agathophyton) is now a *Blitum;* and Atriplex pedunculata goes to the genus

Obione of Gærtner. The total number of species enumerated is 347, arranged in 2 suborders, 7 tribes, and 46 genera.

A Flora of North America, arranged according to the Natural System, by John Torrey and Asa Gray. Vol. i. parts 3 and 4.

At pages 5 and 41 of the volume of this work for 1839, this important publication has been already noticed. Since that time two more parts, completing the first volume, have made their appearance. They contain the remainder of Leguminosæ, and all the orders as far as Loranthaceæ inclusive, of DeCandolle's Prodromus, embracing therefore some of the most extensive of the orders commonly cultivated in gardens.

The work is so full of original and valuable matter that to make extracts is an endless labour ; all persons interested in the North American Flora will of necessity procure the book itself. The reviewer must confine himself to general observations upon points to which special attention should be drawn.

The authors have bestowed much pains upon extricating the entangled synonymy of garden plants long cultivated in European gardens, and the opportunity enjoyed by Dr. Gray of examining, when in Europe, the original authorities upon which numerous species have been founded, gave him such advantages as no previous American Botanist has ever possessed. That he has used such opportunities with profit will not be doubted by any one who knows his Botanical skill and peculiar aptitude for critical investigation. We are however clearly of opinion that in reverting at all times to the first name that has been given to a particular species he occasionally sacrifices general convenience to chronological rigour. For instance, it appears that the name *Cratægus tomentosa* was given by Linnæus to the plant now universally called *C. pyrifolia* ; and consequently the former name is restored; but surely this is precisely one of the cases where *summum jus* is *summa injuria*, for the effect of the alteration is to render the nomenclature of every writer upon American trees, with the solitary exception of Duroi, at variance with that of the work now in course of publication. Had Linnæus given such a description of his plant as would have enabled Botanists to know what he meant, the name of *C. pyrifolia* would not have been substituted; but he did no such thing ; he assigned his plant a specific character, which is as applicable to other species, and he illustrated his meaning by quoting a synonym of Gronovius, which instead of being a Cratægus is *Amelanchier Canadensis.* Succeeding Botanists could not therefore tell what he meant, and the second name they gave to the plant of Linnæus ought we think to have been retained.

There is a large, and often, we doubt not, a very proper reduction of species, which in many cases have been created upon garden seedlings, whose peculiar features have been owing to domestication. Too much care however cannot be exercised in this respect, or a greater evil will result from confounding different species under one common name, than from separating mere varieties as distinct species. In the genus Calycanthus for example, *C. lævigatus* is combined with *C. floridus* and *C. glaucus.* But unless there is some positive evidence that the first of these plants is the same as the other two its great dissimilarity of appearance would make it desirable to keep it distinct. Again, in joining *Œnothera serotina* with *Œ. fruticosa,* two more widely different plants are united, than *Œ. glauca* and *fruticosa* which are separated.

We might make some similar observations upon genera, such as the union of *Geum* with *Sieversia, Bartonia* with *Mentzelia,* and of *Œnothera* with *Godetia,* while *Horkelia* is separated from *Potentilla, Vachellia* from *Acacia,* and *Cerasus* from *Prunus ;* but these are matters of less importance.

In conclusion it is only necessary to call attention to the supplementary matter appended to the volume. It shows the result of Dr. Gray's examination of European herbaria, so far as the earlier orders are concerned, an advantage he had not enjoyed when the first and second parts of the work went to press. Nothing can indicate more clearly than this supplement the unwearied diligence with which Dr. Gray studied the important materials then for the first time placed before him.

The authors may be congratulated upon having proceeded so far in their publication, which, it is not too much to say, is one of the most important additions to systematical botany that has appeared for many years.

187. PERĪSTY̆LŬS *goodyeroīdĕs*. Lindl. gen. & sp. orch. p. 299.

A herbaceous species of the Orchidaceous order, inhabiting the north of India. It has a long spike of pure white flowers, about the size of the Lily of the Valley, the fragrance of which it rivals. A specimen before me from Ceylon, which has flowered with Messrs. Loddiges (no. 965), does not appear to differ from the plant of the Himalayas.

188. DENDRŌBĬŪM (Onychium) *acículārĕ;* caule basi conico angulato sursum tereti, foliis acicularibus, flore solitario ? terminali galeato, labelli postici trilobi per medium tricarinati lobis lateralibus rotundatis anticè et intermedio ovato serrulatis.

A curious little species, with the base of the stems angular and conical, while the whole of the upper part suddenly tapers and becomes very slender. It bears about three acicular leaves, from the axil of the uppermost of which springs the short peduncle, bearing at its end a cluster of small dry scales, from which proceeds a single yellowish flower slightly tinged with pink. Messrs. Loddiges received it from Mr. Cuming, who gathered it at Sincapore (no. 174).

189. LĬPĂRĬS *spathulātă;* pseudobulbis ovato-oblongis diphyllis, foliis ensiformibus basi angustatis scapo ancipiti longioribus v. subæqualibus, racemo denso erecto cylindraceo, petalis filiformibus, sepalis lineari-oblongis, labello ovato-lanceolato canaliculato recurvo basi ecalloso.

A plant of no beauty, imported by Messrs. Loddiges from India, with a long raceme of minute green flowers. It was originally found in the Burmese empire by Mr. Griffith, and is the no. 772 of that indefatigable Botanist's Burmese herbarium.

190. EPIDĒNDRŪM (Aulizeum) *vīscĭdūm;* caule tereti monophyllo vaginâ alterâ longiore infra folium, folio canaliculato mucronulato, racemo paucifloro, bracteis herbaceis glutinosis carinatis ovarii dimidium æquantibus, petalis sepalisque linearibus acuminatis herbaccis, labelli tripartiti basi bicallosi laciniis lateralibus semirhombeis acuminatis setaceo-fimbriatis intermediâ subulatâ brevioribus, clinandrio cucullato dentato.

A native of Mexico, and nearly allied to E. ciliare, from which its single narrow channelled leaf, smaller flowers, and glutinous bracts distinguish it. The flowers have a weak smell like Cucumbers. It was imported by Messrs. Loddiges (373).

191. MAXILLĀRĬĂ *macrophȳllă*. Poppig. Bot. Reg. 1838. misc. 175.

Of this fine plant Messrs. Loddiges have flowered a new variety from Bolivia (487), with the inside of the sepals and the tips of the petals stained with purple. It does not otherwise differ from the original form of the species.

192. DENDRŌBĬŪM *gemēllūm.* Lindl. gen. & sp. orch. no. 28.

This plant has been imported from Sincapore by Messrs. Loddiges, and forms their no. 158 of Mr. Cuming's collections. It is a long-stemmed grassy-leaved plant, with small pale yellowish green flowers, growing in pairs from short rigid two-valved truncated compressed spathes, placed opposite the leaves. In this respect it is like *D. biflorum*, of which it has all the habit; but the lip is perfectly entire and not three-lobed.

193. ONCĪDĬŪM *microchīlūm* (Bateman in litt.); pseudobulbis lenticularibus brevibus monophyllis, folio ensiformi carinato carnosissimo acuto quam scapus erectus versus apicem paniculatus quadruplò breviore, sepalis liberis lateralibus longiùs unguiculatis petalisque oblongis subundulatis retusis, labello subrotundo cordato tridentato sepalis duplò breviore, cristâ subrotundâ 5-crenatâ dente intermedio labelli parùm breviore, columnæ nanæ alis oblique truncatis.

Of this curious Oncidium, sent by Mr. Skinner from Guatemala, Mr. Bateman possesses live specimens. He truly calls it a most distinct and remarkable species; the smallness of its lip, which is not half so long as the lateral sepals, being a singular feature. The leaves are about eight inches long; the flowers the colour of *O. crispum.*

194. ONCĪDĬŪM *Wentworthiānūm* (Bateman in litt.); pseudobulbis nebulosis oblongis compressis ancipitibus diphyllis, paniculâ angustâ elongatâ ramulis 3-floris, sepalis liberis petalisque oblongo-lanceolatis acutis, labelli cordati laciniis lateralibus rotundatis grossè crenatis intermediâ multò brevioribus; intermediæ ungue basi lato apice angustiore lateribus rectis laminâ reniformi denticulatâ basi ipsâ labelli duplo angustiore, cristâ 5-dentatâ denticulis 2 anticis auctâ, columnæ alis erosis brevibus.

Mr. Bateman has favoured me with a fine specimen of this beautiful species, which he has received from Mr. Skinner and named after Lord Fitzwilliam, and which approaches *O. Baueri* and *altissimum* in its general appearance. The flowers are however very differently shaped, and richly stained with crimson upon a yellow ground. The specimen was accompanied by the following note.

"This is quite a distinct and most beautiful species; it forms festoons sometimes twice the length of the specimen sent, and is much used in adorning altars. The beautifully mottled pseudo-bulbs at once distinguish it from every other species; it has flowered here, and I have had it drawn for the Orchidaceæ of Mexico and Guatemala. In habit it is never half the size of *O. Baueri* and *O. altissimum*, though it rivals them in the length of its stems; neither does it ever form compound *lateral* branches from the spike."

195. BOLBOPHȲLLŪM *flāvĭdŭm*; pseudobulbis oblongis compressis vaginis 2 membranaceis vestitis, folio basi angustato spicis laxis longiore, sepalis acuminatis, petalis oblongis obcordatis acutis, labello bicarinato recurvo: lobis lateralibus undulatis obsoletis, columnâ bicorni.

A pale yellow-flowered Orchidaceous plant, imported from Sierra Leone by Messrs. Loddiges (107). It has flowers in size and form like those of B. cocoinum, but they are arranged in a lax spike.

196. ERĬĂ *nūtāns*; caule tereti folioso, foliis oblongis undulatis substriatis basi canaliculatis, flore campanulato solitario terminali nutante glabriusculo, bracteâ planâ patente carnosâ subrotundo-ovatâ, sepalis lateralibus duplo latioribus basi rotundatis apice petalisque obtusis, labelli trilobi lobis lateralibus erectis intermedio transverso carnoso apiculato: lineâ unâ per axin productâ infra apicem interruptâ et magis elevatâ duabus lateralibus abbreviatis prope sinus.

A pretty species of Orchidaceous Epiphyte, with a single large nodding terminal white flower, beneath which is a roundish-ovate flesh-coloured thick bract. The tip of the petals and labellum is yellow. Collected at Sincapore by Mr. Cuming, and flowered by Messrs. Loddiges (129).

197. GRŌBȲĂ *galeātă*; petalis oblongis obliquè rhombeis apice rotundatis cum sepalo dorsali breviore in galeam dispositis, sepalis lateralibus deflexis basi connatis, labelli tripartiti laciniis lateralibus linearibus intermediâ cuneatâ truncatâ: disco basi 4-dentato tuberculis nitentibus verrucoso.

A Brazilian Orchidaceous plant, of which I have received specimens from both Messrs. Lucombe, Pince, and Co. of Exeter, and Mr. Barker. Its habit is quite that of Grobya Amherstiæ, but the flowers are different. They are dull green, stained a little with purple; and the lip is indistinctly banded with the same colour. The petals are much larger than the dorsal sepal, beneath which they are so placed as to resemble a helmet overshadowing the lip. This species indicates the affinity of the curious genus Malachadenia, which is apparently allied to Grobya.

198. PHOLIDŌTĂ *conchoīdĕă;* spicâ pendulâ distichâ imbricatâ, bracteis oblongis concavis apiculatis, sepalorum lateralium carinâ limbo æquali, epichilio 3-lobo laciniis lateralibus rotundatis intermedio obsoleto, hypochilio utrinque in lobum ascendentem producto basi intus lineis tribus elevatis distantibus.

This curious plant was found in Manilla by Mr. Cuming, and raised at Knypersley, where it blossomed a month ago, after having been occupied in forming its flower spike during the space of six months. It is very like *P. imbricata*, but its flowers are nearly twice as large, and the keels of the lateral sepals are so deep and concave as to give the lower side of the flower the appearance of the inside of a bivalve shell.

199. CONVŌLVŬLĬS *flōrĭdŭs.* Linn. suppl. 136. Jacq. ic. rar. t. 34.

This plant has flowered with Mr. W. Young of the Milford Nursery. It is a shrub with very long grey willow-like leaves, and terminal panicles of small cream-coloured flowers. It was raised from seeds collected in Teneriffe by Mr. Barker Webb. Linnæus calls it the most beautiful of all Convolvuli, because of the abundance of its flowers: but they are far too small and colourless to justify such an encomium. It is however a pretty greenhouse shrub.

200. PRONĀYĂ *ēlĕgāns.* Hugel enum. p. 9. Bot. Arch. t. 6.

A twining evergreen shrub from Swan River, with narrow greyish green leaves, and terminal clusters of pale lilac flowers. It has the habit of a Sollya, to which it is nearly allied, but it is very inferior to it in beauty. No doubt a greenhouse plant, although it may live out of doors in the summer, or be capable of enduring a mild winter. Specimens have been sent me by Mr. Young, from the Milford Nursery.

201. IPOMǢĂ *pēndŭlă.* R. Brown, prodr. 436. Endlich. prodr. fl. Norf. 52.

This pretty plant has been raised by Mr. Robert Arnott, of the Cambrian Nursery, Charlton Kings, near Cheltenham, from Norfolk Island seed. It was sown in the spring of 1839, and was preserved through the winter in a greenhouse, the temperature of which did not exceed 50°. It is a rather woody plant, with many prickles on the stem. The leaves are digitate, with the two lower lobes usually 2-lobed; the purple flowers are about two inches long. It flowered freely during the past summer in a pot out of doors.

202. FŪCHSĬĂ *corymbiflōră.* Fl. Peruv. 3. t. 325. f. 6.

As this plant will be figured in our next number, it is sufficient in this place to announce its having been raised by Mr. Standish, of the Nursery, Bagshot, and to state that it throws all the other Fuchsias into the shade.

203. THOMĀSĬĂ *canēscēns.* Appendix to the Botanical Register, p. xviii.

This little Swan River shrub has been flowered by Robert Mangles, Esq. of Sunning Hill. It has small cordate 3-lobed leaves, covered on the underside with whitish hairs. The blossoms are a bright purple. It is a pretty greenhouse plant.

204. IMPĂTĬĒNS *cāndĭdă;* caule erecto, foliis verticillatis angustè lanceolatis acuminatis argutè serratis basi utrinque glandulosis, pedunculis terminalibus multifloris, sepalo dorsali inermi emarginato, calcare brevi incurvo, petalorum biloborum laciniâ alterâ nanâ cirrhatâ alterâ lanceolatâ acuminatâ crispâ.

A noble-looking tender annual, from India, presented to the Horticultural Society by the Honourable Court of Directors of the East India Company. It grows six feet high, and bears large terminal clusters of snow-white flowers, slightly spotted with crimson.

205. SĀLVĬĂ *Rēglă.* Cavanilles Icones, vol. 5. p. 33. tab. 455. Bentham Labiat. p. 288.

This beautiful half hardy herbaceous plant has at last been introduced by the Horticultural Society, who received it from Mr. Hartweg. It has a shrubby stem, uneven light green leaves, and long bright scarlet flowers. It will soon be figured in this work.

206. MARTY̆NĬĂ *frāgrāns;* foliis cordatis angulatis grossè dentatis suboppositis longè petiolatis, racemo paucifloro, calycibus campanulatis obliquis plicatis, bracteolis plano-convexis fungosis, floribus tetrandris.

A half-hardy annual of very great beauty and delicious fragrance, for which I am indebted to Mr. Marnock, of the nursery, Hackney. It has large purple flowers enlivened by a bright yellow streak along the middle of the lower lip, and is a native of Mexico, in the vicinity of the Real del Monte mines. A figure of it will speedily appear in this work.

207. SĀLVĬĂ *prunellŏīdĕs*. Humboldt, Bonpland, & Kunth, nova genera et species plantarum, vol. 2. 289. Bentham, Labiatæ, p. 256.

This plant has been raised by Mr. Martin Mayes, of the Durdham Down Nursery, near Bristol, from roots received about three months since from Mexico. It was found in New Spain, by Moçino and Sesse, and also by Karwinski; Humboldt and Bonpland met with it on rocks upon the sides of the volcanic mountain Jorullo. Mr. Mayes informs me that its roots are tuberous and about the size of a small walnut; he adds, that the plant does not grow more than from six to eight inches high, and that he thinks it would be suitable for bedding out in summer, when it would form a good contrast with Verbena Melindres. The flowers are blue.

208. POLYSTĂCHȲĂ *cērĕă;* pseudobulbis ovatis, foliis oblongo-linearibus undulatis racemo simplici obtuso brevioribus, floribus cernuis, labelli trilobi pone basin callosi per axin pubescentis lobis lateralibus nanis intermedio obtuso undulato.

A small species, imported from Oaxaca by Messrs. Loddiges (265). The flowers, when full blown, have the colour and texture of old wax; they are distinctly drooping and arranged in a very dense obtuse raceme about an inch long. In habit, size, and general appearance the species bears much resemblance to the Encyclia nana of Pöppig, which, like the E. polystachya of that author, is apparently a species of Polystachya, notwithstanding the manner in which the pollen-masses are represented, about which I think there must be some error. In this plant there is a pair of pollen-masses, excavated at the back, and attached to a short caudicula and small gland.

209. ĔRĬĂ *velutīnă* (G. Loddiges in litt.); caule tereti velutino, foliis distichis carnosis ovato-lanceolatis margine revolutis junioribus utrinque velutinis adultis suprà glabris, flore solitario oppositifolio inter squamas herbaceas obtusas villosas sessili, sepalis petalisque linearibus apice recurvis extus hirsutis, labello cuneato elongato canaliculato apice rotundato subtrilobo supra pubescente inappendiculato.

A singular plant of no beauty, brought to Messrs. Loddiges from Sincapore by Mr. Cuming. It has pale dirty yellow flowers, growing singly among hairy bracts opposite the leaves. It is probable that Wallich's *Dendrobium vestitum*, of which I have seen only fragments of flowers, is a species of Eria allied to this, and it is certain that among the distributed specimens of that plant are branches of the present species without flowers.

Icones plantarum rariorum horti regii Botanici Berolinensis. By H. F. Link, Fr. Klotzsch, and Fr. Otto. Part I.

This is a work in all respects worthy of the present state both of Botanical science and Pictorial art. It is intended to be a periodical record of the new plants that flower in the Royal Botanical Garden of Berlin, and will appear in numbers of the small quarto size, each of which contains two sheets of letter-press and six coloured plates. The plan of the work is that of the Botanical Register and Magazine, and it is to be hoped that it will meet from the public with the same favourable reception as has attended those successful publications. The names of the authors, among the highest in Botanical and Horticultural science, are an ample guarantee of the manner in which the work will be conducted; and the richness of the Berlin garden in new plants, render it of no small importance to the public that the species which are collected there should be made known as quickly as they appear. I may therefore be permitted to express a hope that this publication will find many subscribers among the wealthy Botanists and Horticulturists of this country. In the meanwhile the contents of each number of the work will be briefly given here, as fast as they appear, but under distinct numbers, so as to be of ready reference. The work will be quoted as *Link, Klotzsch, & Otto Ic.*

210. PŪYĂ *Altenstēinĭī.* Link, Klotzsch, & Otto, ic. t. 1.

A most beautiful plant, with the habit of Tillandsia, long green unarmed leaves, and oval heads of rich scarlet bracts, from among which protrude long snow-white flowers. It was found by Moritz in the year 1836, in his journey through Columbia and to the Cordilleras, between La Guayra and Caraccas. It requires the stove, of which it is a splendid ornament.

211. LOBĔLĬĂ *dīscŏlŏr.* Link, Klotzsch, & Otto, ic. t. 2.

A neat greenhouse herbaceous plant, with deeply lobed heart-shaped leaves spreading flat upon the ground, and erect panicles of small blue flowers. It was found by Mr. Charles

Ehrenberg in Mexico in the year 1838. The name however will have to be changed, as it is the same as *Lobelia subnuda* of Bentham's Plantæ Hartwegianæ, no. 336.

212. OLĬNĬĂ *Capēnsĭs*. Link, Klotzsch, & Otto, ic. t. 3.

A new Cape shrub, belonging to the Myrtaceous order, with oval stalked bright green leaves, and dense terminal clusters of greenish flowers succeeded by bright reddish berries. It belongs to a set of Myrtles whose stems are definite, leaves destitute of transparent dots, a large connective to the anthers, and a spiral embryo. It is a greenhouse shrub, flowering from April to the end of June, and ripening its fruit the second year: so that the bush has at the same time flowers, green fruit, and ripe red fruit.

213. ŌXĂLĬS *Ottōnĭs*. Link, Klotzsch, & Otto, ic. t. 4.

A Chilian species, sent to Berlin from Mr. Cameron of Birmingham. It has bright yellow flowers, and leaflets so deeply divided that each stalk seems as if it bore six leaflets instead of three.

214. MICRŌSTY̆LĬS *histionānthă*; (Link, Klotzsch, & Otto, ic. t. 5.) pseudobulbis elongato-ovatis diphyllis, foliis membranaceis latè ovatis acutis undulatis nitidis basi attenuato-vaginantibus apice recurvatis, scapo 6-8-angulato, floribus æreo-olivaceis depresso-corymbosis, sepalis reflexis anticis connatis, petalis filiformibus circinatis, labello oblongo-orbiculari integerrimo obtuso.

A plant found in La Guayra by Moritz, and sent to the Berlin Garden in 1836. It has small green flowers, at the end of a scape a foot and half high, and arranged in a depressed corymb. The leaves are large, thin, and green. It is a stove plant, and is apparently the same as Malaxis Parthoni, *Morren in Bullet. acad. Bruxell.* 5. 486. *with a figure*, a native of Brazil, from which however Dr. Klotzsch thinks it may be distinguished.

215. ONCĪDĬŬM *carthaginēnsĕ*. Link, Klotzsch, & Otto, ic. t. 6.

This is one of the many varieties that now abound in our gardens, concerning whose limits as species it is difficult to arrive at any positive conclusion. It is certainly not distinct from *O. sanguineum*, which however may itself be a variety of *O. carthaginense*.

216. ONCĪDĬŪM *pelicānūm*. Hort. Monac.

A specimen from Mr. Bateman, who received his plant from the botanic garden of Munich, shows this plant to be very closely akin to *O. reflexum*, from which it differs principally in the sepals and petals being less blotched, in the lateral lobes of the lip being smaller in proportion to the intermediate segment, and in the tubercles of the crest, which is smooth, not downy, being rather differently arranged. I am unable to judge how far it may be entitled to rank as a distinct species. The name has doubtless been given in allusion to the column, which is not unlike a pelican pecking her breast.

217. BOLBOPHȲLLŪM *sōrdĭdūm*; pseudobulbis tetragonis . . . . , spicâ carnosâ acuminatâ conicâ, floribus sessilibus carnosissimis, bracteis ovatis obtusis adpressis ovario longioribus, sepalis ovatis acutissimis, petalis linearibus apice rotundatis, labello unguiculato ovato plano convexo basi auriculato, columnâ utrinque bisetâ.

A native of Guatemala, very near the Bolbophyllum clavatum of Thouars. It grows with a spike 6 inches long, upon a scape about half as long again. The flowers are very fleshy, a dull olive brown externally, but brightly mottled with purple in the inside. I owe my knowledge of it to Mr. Bateman.

218. RODRIGUĒZĬĂ *maculātă*; racemis nutantibus basi laxè et distanter vaginatis, sepalo supremo cum petalis acuto lateralibus basi tantùm connatis paulò breviore, labello oblongo convexo retuso secus axin depresso infra medium cristâ pubescente utrinque elongatâ aucto basi 4-dentato, columnâ brevi utrinque brachium protrudente.

A native of Guatemala, whence it was sent to Mr. Bateman by Mr. Skinner. It has small flowers, faintly spotted with red, and has no beauty. Communicated by Messrs. Loddiges.

219. DENDRŌBĬŪM (§ Eudendrobium, foliis planis, floribus subgemellis, labello trilobo) *calcarātūm*; caulibus nigro-pubescentibus, foliis linearibus obliquè bilobis, floribus resupinatis, sepalis ovatis lateralibus revolutis basi in cornu conicum pedicelli longitudine productis, petalis lineari-lanceolatis, labelli linearis carnosi lævis trilobi laciniâ intermediâ subrotundâ marginibus incurvis ungue cum columnæ pede in calcar verum connato.

A slender inconspicuous species, allied to *D. revolutum* and *biflorum*; with green flowers growing in pairs opposite the leaves. It was found at Sincapore by Mr. Cuming, and flowered with Messrs. Loddiges, (no. 158).

20 ERĬĂ (Tons æ) *clavicāulĭs* (Wallich in litt.); caulibus clavatis, foliis lanceolatis acutissimis, bracteis ovato-oblongis concavis recurvis, floribus glabris, sepalis lateralibus triangularibus acutis dorsali petalisque subæqualibus ovalibus subundulatis, labelli trilobi lobis lateralibus ascendentibus rotundatis intermediâ oblongâ suprà carinatâ tomentosâ infra sinus 2-tuberculatâ.

A very pretty white Indian epiphyte belonging to a division of the genus Eria, in which the sepals are perfectly smooth, or nearly so. Its lip is downy along the middle, and all over the centre lobe, and is bordered with pink round the lateral segments. It was sent to Messrs. Loddiges by Dr. Wallich, with the name above cited.

221. IPOMŒ̄Ă *ficĭfŏlĭă;* piloso-scabra, foliis trilobis: lobis lateralibus rotundatis intermedio angustiore et productiore acuto, pedunculis subtrifloris, sepalis acutis nigro-hirsutis, tubo corollæ limbo breviore.

A beautiful stove climber, of which a further account will be speedily given, together with a figure. It has rich purple flowers, with an unusually short tube, and is readily known out of flower by the side lobes of its leaves being almost semicircular. It has been raised in the nursery of Messrs. Salter and Wheeler, Victoria Nursery, Weston Road, Bath.

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Euphorbia rigida . .	1838	43	..
—— veneta . .	1838	6	..
Eurybia glutinosa . .	1839	..	112
Euthales macrophylla .	1840	..	119
Eysenhardtia amorphoides	1839	..	55
Fabiana imbricata . .	1839	59	..
Fernandezia lunifera .	1839	..	147
Fuchsia fulgens . .	1838	1	..
—— cylindracea . .	1838	66	97
—— corymbiflora . .	1840	70	202
—— Standish's . .	1840	2	..
Funkia Sieboldi . .	1839	50	..
Galbanum . . .	1839	..	107
Galeandra Baueri . .	1840	49	..
Gardoquia betonicoides .	1838	..	159
Garrya laurifolia . .	1840	..	53
Genista bracteolata . .	1840	23	..
Geranium rubifolium .	1840	67	..
—— tuberosum .	1839	10	..
Gesneria reflexa . .	1840	..	39
Glaucium rubrum . .	1839	..	78
Gompholobium versicolor	1839	43	62
Gongora fulva . . .	1839	51	..
—— nigrita . .	1839	..	86
Goodyera rubicunda . .	1839	..	92
Govenia Gardneri . .	1839	..	51
—— lagenophora .	1839	..	66
—— liliacea . .	1838	13	..

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		pl.	misc.
Grammatophyllum multiflorum	1838	..	80
——————— ———	1839	65	..
Grevillea Thielemanniana	1839	..	72
Grobya galeata	1840	..	197
Guaiacum officinale	1839	9	..
Gunnia picta	1838	..	77
Hardenbergia digitata	1840	60	142
Hartwegia purpurea	1840	..	96
Helichrysum scorpioides	1838	..	84
Helleborus lividus	1838	54	..
Hexopia crucigera	1840	..	90
Hibiscus Cameroni	1840	..	31
——— Wrayæ	1840	69	149
Hoitzia mexicana	1838	..	21
Hormidium	1839	..	13
Hoteia japonica	1839	..	133
Hovea crispa	1839	..	19
——— pungens	1839	..	28
——— Manglesii	1838	62	..
Hoya coriacea	1839	18	..
—— ———	1840	..	1
Huntleya Meleagris	1838	..	20
——— ———	1839	14	..
——— violacea	1839	..	17
Hydrotænia Meleagris	1838	..	128
Hymenocallis Harrisiana	1840	..	63
——— rotata	1840	..	55
Impatiens candida	1840	..	204
——— glanduligera	1840	22	..
——— macrochila	1840	8	..
——— tricornis	1840	9	..
Inga Harrisii	1839	41	..
Ionopsis teres	1838	..	181
Ipomœa ficifolia	1840	..	221
——— longifolia	1839	..	124
——— ———	1840	21	..
——— pendula	1840	..	201
——— Purga	1839	..	136
——— tyrianthina	1838	..	162
——— Schiedeana	1838	..	22
Iris deflexa	1840	..	42
—— ———	1840	..	62
—— fragrans	1840	1	..
Ismene deflexa	1839	..	142
Isochilus lividum	1839	..	45
Isotropis striata	1839	..	61
Juniperus tetragona	1839	..	102
——— flaccida	1839	..	103
——— mexicana	1839	..	104
——— squamosa	1839	..	18
Lælia furfuracea	1839	26	..
——— autumnalis	1839	27	..
——— albida	1839	54	4
——— flava	1839	..	143
——— majalis	1839	..	42
——— superbiens	1840	..	87
——— rubescens	1840	41	25
Lathyrus Armitageanus	1840	..	14
Lavatera maritima	1838	..	140
Lemonia spectabilis	1840	59	..
Leptodermis lanceolata	1839	..	131
Leycesteria formosa	1839	2	..
Lilium Thunbergianum	1839	38	..
Linaria delphinoides	1840	..	15
Liparis pendula	1838	..	180
——— spathulata	1840	..	189
Lissanthe stellata	1840	..	2
——— ———	1840	..	13
——— verticillata	1840	..	26
Lissochilus parviflorus	1838	..	14
Loasa lateritia	1838	22	..
Lobelia discolor	1840	..	211
——— subnuda	1840	..	211
——— fenestralis	1838	47	..
——— multiflora	1840	..	17
Lopezia lineata	1840	40	60
Luisia alpina	1838	..	101
Lupinus arboreus	1838	32	..
——— Hartwegi	1839	31	..
——— Barkeri	1839	56	..
——— bilineatus (note)	1839	56	..
——— mexicanus (note)	1839	56	..
——— leptocarpus	1840	38	..
Macradenia mutica	1839	..	22
Malachadenia clavata	1839	..	110
Malaxis Parthoni	1840	..	214
Malva lucida	1839	..	130
——— mauritiana	1839	..	82
Mandevilla suaveolens	1840	7	..
Manglesia glabrata	1840	..	27
Marlca begonifolia	1838	61	..
Martynia fragrans	1840	..	206
Masdevallia infracta	1838	..	64
Matthiola odoratissima	1839	25	..
Maxillaria Colleyi	1838	..	161
——— Rollissonii	1838	40	..
——— vitellina	1838	..	116
——— ———	1839	12	..
——— porrecta	1838	..	173
——— macrophylla	1838	..	174
——— ———	1840	..	191
——— costata	1838	..	175
——— variabilis	1838	..	26
——— madida	1838	..	74
——— Boothii	1838	..	95
——— tenuifolia	1839	8	..
——— stapelioides	1839	17	..
——— xanthina (note)	1839	17	..
——— foveata	1839	..	2
——— acutifolia	1839	..	148
——— lentiginosa	1839	..	93
——— aureofulva	1840	..	43
——— stenopetala	1840	..	43
——— cucullata	1840	12	..
——— rhombea	1840	12	..
——— Macleei	1840	..	155
——— Skinneri	1840	..	101
——— ———	1840	..	145
Medicago clypeata	1839	..	90
Medinilla erythrophylla	1838	..	158
Megaclinium oxypterum	1839	..	10
Microstylis excavata	1838	..	93
——— histionantha	1840	..	214
Miltonia candida	1838	..	29
Mimosa marginata	1838	..	152
Morina longifolia	1840	36	..
Mormodes buccinator	1840	..	~~9~~ 10
——— pardina	1838	—	176
——— ———	1839	..	7

		pl.	misc.
Morna nivea	1838	9	..
Mòrrenia odorata	1838	..	129
Mucuna pruriens	1838	18	..
Mycaranthes obliqua	1840	..	184
Nemaconia gracilifolia	1839	..	15
Nemesia floribunda	1838	39	..
Nepeta salviæfolia	1839	..	123
Nicotiana rotundifolia	1838	..	110
Notylia punctata	1838	..	166
——— incurva	1838	..	167
——— Barkeri	1838	..	168
——— tenuis	1838	..	169
——— micrantha	1838	..	170
Oberonia cylindrica	1840	..	23
——— recurva	1839	..	8
——— Wightiana	1839	..	9
Octomeria gracilis	1838	..	55
——— diaphana	1839	..	146
——— tridentata	1839	..	43
Odontoglossum Bictoniense	1840	66	..
——— Clowesii	1839	..	153
——— cordatum	1838	..	90
——— grande	1840	..	94
——— maculatum	1840	30	..
——— Rossii	1839	48	..
Olinia capensis	1840	..	212
Oncidium tetrapetalum	1838	..	56
——— confragosum	1838	..	92
——— pulvinatum	1838	..	115
——— ———	1839	42	..
——— hians	1838	..	124
——— ranifernm	1838	48	..
——— luridum guttatum	1839	16	..
——— trulliferum	1839	57	..
——— Forbesii	1839	..	149
——— excavatum	1839	..	150
——— sanguineum	1839	..	68
——— unicorne	1839	..	76
——— carinatum	1840	..	45
——— intermedium	1840	..	46
——— unicornutum	1840	..	47
——— Carthagineum	1840	..	215
——— pelicanum	1840	.	216
——— Huntianum	1840	..	137
——— pachyphyllum	1840	..	138
——— Insleayi	1840	..	21
——— incurvum	1840	..	174
——— leucochilum	1840	..	79
——— ornithorhynchum	1840	10	95
——— ampliatum	1840	..	97
——— microchilum	1840	..	193
——— Wentworthianum	1840	..	194
——— pallidum	1840	..	108
——— ramosum	1840	..	154
——— stramineum	1840	14	..
——— ———	1838	..	63
Ophelia purpurascens	1840	..	158
Opoidia galbanifera	1839	..	107
Ornithogalum geminiflorum	1838	..	100
——— montanum	1808	28	..
Oxalis Darvalliana	1840	..	11
——— Ottonis	1840	..	213
Oxyanthus versicolor	1840	..	150
Pæonia (Onæpia) Brownii	1839	30	..
Panætia fulva	1838	..	83
Papaver amoenum	1839	..	80
Passiflora hispidula	1840	..	3
——— ———	1840	..	16
——— onychina	1838	21	1
——— verrucifera	1840	..	105
——— ———	1840	52	..
Patersonia sapphirina	1839	60	..
Paxtonia rosea	1838	60	113
Pentlandia miniata	1839	68	..
Pentstemon barbatum carneum	1839	21	..
——— crassifolium	1838	16	..
——— gentianoides	1838	3	..
Peristeria guttata	1840	..	33
Peristylus goodyeroides	1840	..	187
Pernettya angustifolia	1840	63	..
Pesomeria tetragona	1838	..	6
Phaius grandifolius	1839	..	40
——— bicolor	1839	..	91
——— Wallichii	1839	..	58
——— albus	1838	33	..
Phalænopsis amabilis	1838	34	..
Philadelphus hirsutus	1838	14	..
——— Gordonianus	1838	..	23
——— ———	1839	32	..
——— triflorus	1838	..	51
——— laxus	1839	39	..
——— mexicanus	1840	..	70
Pholidota articulata	1839	..	57
——— conchoidea	1840	..	198
Phycella biflora	1838	..	72
Physinga prostrata	1838	..	45
Physosiphon carinatus	1838	..	132
Picris asperrima	1838	..	108
——— barbarorum	1838	..	107
Pimelea incana	1838	24	..
——— crinita	1838	..	109
——— prostrata	1839	..	81
Pinus oocarpa	1839	..	23
——— Llaveana	1839	..	24
——— Hartwegii	1839	..	95
——— Devoniana	1839	..	96
——— Rnsselliana	1839	..	97
——— macrophylla	1839	..	98
——— pseudostrobus	1839	..	99
——— apulcensis	1839	..	100
——— filifolia	1840	..	132
——— Coulteri	1840	..	133
Plagianthus Lampenii	1838	..	25
Pleurothallis circumplexa	1838	..	27
——— marginata	1838	..	70
——— aphthosa	1838	..	71
——— vittata	1838	..	133
——— ophiocephala	1838	..	48
——— stenopetala	1838	..	182
——— muscoidea	1838	..	165
——— pectinata	1839	..	1
——— strupifolia	1839	..	3
——— bicarinata	1889	..	11
——— scabripes	1839	..	155
——— pachyglossa	1840	..	146
——— seriata	1840	..	175
——— villosa	1840	..	40
——— ciliata	1840	..	41
Podolepis contorta	1838	..	120

		pl.	misc.
Polemonium cœruleum grandiflorum	1840	..	76
Polygonum amplexicaule	1838	..	117
——— ———	1839	46	..
Polystachya zeylanica	1838	..	144
——— ramulosa	1838	..	142
——— luteola	1838	..	143
——— affinis	1839	..	44
——— bracteosa	1840	..	102
——— cerea	1840	..	208
Ponera graminifolia	1839	..	15
Portulaca Thellusonii	1839	..	114
——— ———	1840	31	..
Pronaya elegans	1840	..	200
Psoralea cinerea	1838	..	106
Pultenæa obcordata	1838	..	57
Puya Altensteinii	1840	..	210
——— cœrulea	1840	11	..
——— heterophylla	1840	71	..
Quekettia microscopica	1839	..	6
Quercus acutifolia	1840	..	160
——— reticulata	1840	..	161
——— crassipes	1840	..	162
——— spicata	1840	..	163
——— mexicana	1840	..	164
——— glaucescens	1840	..	165
——— sideroxyla	1840	..	166
——— lancifolia	1840	..	167
——— petiolaris	1840	..	168
——— mannifera	1840	..	72
——— regia	1840	..	73
——— Brantii	1840	..	74
Rigidella flammea	1840	16	64
Ribes Menziesii	1838	..	52
Rodriguezia crispa	1840	54	..
——— ———	1839	..	139
——— laxiflora	1839	..	138
——— maculata	1840	..	218
Roepera aurantiaca	1838	..	105
Roscöea purpurea	1840	61	..
Saccolabium gemmatum	1838	..	88
——— densiflorum	1838	..	103
——— calceolare	1838	..	139
——— bifidum	1838	..	5
——— compressum	1840	..	5
——— micranthum	1839	..	52
Salvia Moorcroftii	1839	..	127
——— patens	1839	23	48
——— confertiflora	1839	29	..
——— canescens	1838	36	..
——— hians	1840	..	115
——— prunelloides	1840	..	207
——— Regla	1840	..	205
Saponaria perfoliata	1839	..	83
Sarcanthus pallidus	1840	..	185
——— oxyphyllus	1840	..	123
Sarcochilus olivaceus	1839	..	27
——— parviflorus	1838	..	50
——— unguiculatus	1840	..	143
Satyrium papillosum	1838	..	154
——— carneum	1838	..	155
——— candidum	1838	..	153
——— pustulatum	1840	18	..
Scaphyglottis reflexa	1839	..	21
——— stellata	1839	..	60

		pl.	misc.
Schizonotus tomentosus	1840	..	156
Schomburgkia marginata	1839	..	12
Schubertia graveolens	1838	..	2
Scilla pratensis	1839	63	—
Sedum miserum	1838	..	122
——— multicaule	1840	..	124
Senecio populifolius, lacteus	1839	45	..
——— cruentus	1839	7	..
——— odoratus	1839	..	111
Sisyrinchium junceum	1840	..	12
Solanum betaceum	1840	..	65
——— ———	1840	..	61
——— candidum	1839	..	125
——— macrantherum	1840	..	181
——— Rossii	1840	..	34
——— uncinellum	1840	15	..
——— vernicatum	1838	..	137
Sollya linearis	1839	..	132
——— ———	1840	3	..
Sophronitis violacea	1840	..	18
Specklinia orbicularis	1838	..	41
——— ciliaris	1838	..	40
——— obovata	1839	..	137
Spiræa barbata	1838	..	65
——— cuneifolia	1839	..	87
——— vacciniifolia	1839	..	88
——— ———	1840	17	..
——— laxiflora	1839	..	89
——— rotundifolia	1840	..	159
——— fissa	1840	..	170
Spiranthes diuretica	1838	..	119
Spironema fragrans	1840	47	48
Sprekelia cybister	1840	33	..
——— glauca	1840	..	104
Stanhopea quadricornis	1838	5	..
——— Lindleyi	1838	..	4
——— tigrina	1839	1	..
——— oculata	1839	..	113
——— ———	1840	..	80
——— graveolens	1840	..	125
——— maculosa	1840	..	28
——— Martiana	1840	..	109
——— Wardii	1840	..	147
Statice arborea	1839	6	..
——— pectinata	1840	65	..
Stelis tristyla	1838	..	69
Stenia pallida	1838	20	..
Stenochilus longifolius	1839	..	115
——— incanus	1839	..	116
Stevia fascicularis	1838	59	..
Tanacetum longifolium	1840	..	78
Thalictrum cultratum	1840	..	77
Thomasia canescens	1840	..	203
Thysanotus intricatus	1838	..	111
——— ———	1840	4	..
——— tenuis	1838	50	..
——— proliferus	1838	8	..
——— isantherus	1839	..	75
Tradescantia iridescens	1838	..	160
——— tridescens	1840	34	..
——— tumida	1840	42	..
Trichinium alopecuroideum	1839	28	..
——— Manglesii (note)	1839	28	..
——— Stirlingii (note)	1839	28	..
Trichocentron iridifolium	1838	..	178

		pl.	misc.
Trifolium involucratum	1840	..	116
Trigonidum acuminatum	1838	..	136
—— Egertonianum	1838	..	135
——	1840	..	100
—— ringens	1840	..	121
—— tenue	1839	..	59
Triptilion spinosum	1840	..	129
Tritonia fucata	1838	35	..
Trymalium odoratissimum	1838	..	30
Tulipa Gesneriana	1838	46	..
—— malcolens	1839	66	..
Urceolina pendula	1838	..	151
Valeriana Napus	1840	..	180
Vanilla bicolor	1838	..	58
Vanda congesta	1839	..	94
—— lamellata	1838	..	125
Veronica diosmæfolia	1840	..	30
—— formosa	1839	..	85
Victoria regia	1838	..	13
Weinmannia venosa	1840	..	36
Xerotes longifolia	1839	3	..
Zichya tricolor	1839	52	..
—— angustifolia (note)	1839	52	..
Zigadenus glaucus	1838	67	..
Zygpoetalum africanum	1840	..	139

PART. II.—GENERAL INTELLIGENCE.

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